fueloil & oil heat

DECEMBER 1959

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Committee Report is ok'd at Chicago API

Dial Hathaway ✻ for Weather

Customer Relations contribute to Success

Inside ✻ fuel Units

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Northwest ✻ equalizes equipment Cost

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✓ Heating Oil
✓ Kerosene
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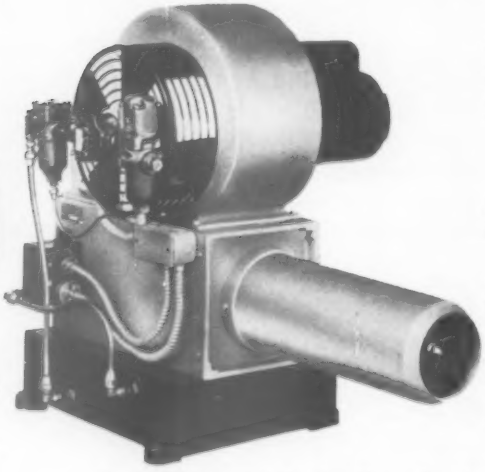

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DECEMBER fueloil & oilheat 1959

VOLUME 18 NUMBER 12

Editorial, circulation and advertising Office: 2 West 45th St., New York 36, N. Y.

CONTENTS

SUBJECT	PAGE	AUTHOR
'One-World' Organization ok'd	47	L. S. MARSHMAN
Dial Hathaway for Weather	50	WILLIAM J. STEIN
Northwest equalizes equipment Cost	52	
Fuel-Units—the inside Story	54	J. W. SCHULZ
Imperial Oil's second Mortgage Plan	57	V. M. DOUGLAS
Air-Conditioning Exposition Report	58	
Building Research Conference on Heating	59	
Coinsurance can break You	61	GEORGE A. STRADER
Charleston Firm marks 50th Anniversary	62	
Boston Group honors Dr. Dooley	63	

COMMERCIAL - INDUSTRIAL SECTION

Modern Oilheating for Schools, Part IV	65	JEAN L. DUPUIS

NEWS

Esso opens Research Center	18
Catherine Woodbury feted by Associations	18
Builders Show planned for January	22
Gas-fired central heating by States	26
SOHIO acquires Leonard Refineries	28
Boiler Men plan marketing Efforts	28
Jack Becker heads Fueloil Committee	49

DEPARTMENTS

6	Leaks
8	Government on Fuels
11	Oilheating Trends
14	Fueloil Prices, Degree-Days
16	Names in the News
32	Industry Groups
76	Manufacturers' Activities
82	New Products

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Among other things . . .

There are reports this month on two notable efforts under way to equalize the cost of oilheating installations as compared with gas. A report of activity aimed at this objective in the Pacific Northwest begins on page 52, while a second mortgage plan now operating in Canada is explained in the feature on page 57.

On the technical side, John Schulz explains the function and operation of the fuel unit in an article which starts on page 54. His explanation covers the unit's operating cycle, with the idea of teaching servicemen enough about such equipment so that they can correct deficiencies.

Two oilheating dealers make news, also—Hathaway Oil, New Bedford, Mass. and its weather service (page 50) and Charleston Oil Co., celebrating its 50th Anniversary in South Carolina (page 62).

Cover photo: A four-barge integrated tow shown in operation on the Mississippi Waterways System.

IF YOU HAVEN'T seen it, get a November issue of *Popular Science* and look up the oilheating story by David Manners starting on page 130. It discusses with interesting detail some of the new oilburning concepts, such as the Waller process, the Pyrocore reactor, the new Jet-Heet system and the Iron Fireman furnace.

Negotiations and "bird-dogging" for the article were arranged last spring by Ralph Hartell, communications director for the National Fueloil Council, New York. He has promoted a number of good magazine articles for the industry, also several exclusive newspaper stories apart from general press releases. Conspicuous was the two-column feature on the first page of the financial section of the *New York Times*, Sunday, October 25th. Again, the *Times* carried a column on the front page of the Real Estate section Sunday, November 15. This is real help in such an influential medium.

AT COLUMBIA UNIVERSITY in mid-November was held an all-day symposium on "Energy and Man," sponsored jointly by the Graduate School of Business and the American Petroleum Institute in honor of our industry's centennial year. In a very distinguished list of historians, scientists and men-of-letters generally the one oil man was Robert Dunlop, youthful president of Sun Oil Co. He talked of the "Petroleum Revolution," which he intimated was a trifle broad to cover in 30 minutes.

But when you think of it, most certainly the century of petroleum has seen far more advance in living standards, in scientific achievement, in human tolerance—in almost anything you want to measure—than occurred in all the previous centuries of the Christian era. Man's economic welfare has always been very closely parallel to the supply of available energy. When there was only the energy of man and his muscle plus a few animals, slavery was a common pattern, and in fact our own country freed four million slaves just shortly after oil came in.

Dunlop noted that the coming of oil blessed many industries other than its own. An example is in lubrication which made possible electrical generation on an adequate scale for the first time, thus enriching the coal industry which fueled the boilers.

He remarked how little the public sees of what it buys in petroleum products; they're most apt to see it in the form of a plastic grocery bag or a stocking on a pretty ankle. Almost no user of fueloil has ever seen any, and he only sees a splash of gasoline through carelessness of a station attendant . . . and yet 70% of all the Nation's energy is furnished by hydrocarbons coming out of a deep well, either as oil or natural gas.

It was a fine symposium, masterminded by Courtney Brown, Dean of the graduate school and until a few years ago the top economist for Standard of Jersey. He also during World War II helped to win skirmishes in the "Battle of the Reflection Pool" in Washington.

AT THE CHICAGO meeting of the API Fueloil Committee, C. M. Blickensderfer retired as chairman to be succeeded by Jack Becker of St. Louis. But Blick is also retiring from the industry. He has finished his years with Sinclair and is going to loaf, at least for now. When Chairman Guzzo of the Marketing Division, at the close of Blick's formal report, told the audience of his imminent retirement there was a very sincere standing applause for a career well spent. Blick's reaction was to lean toward the microphone and remark, "Now I'm not sure I want to quit."

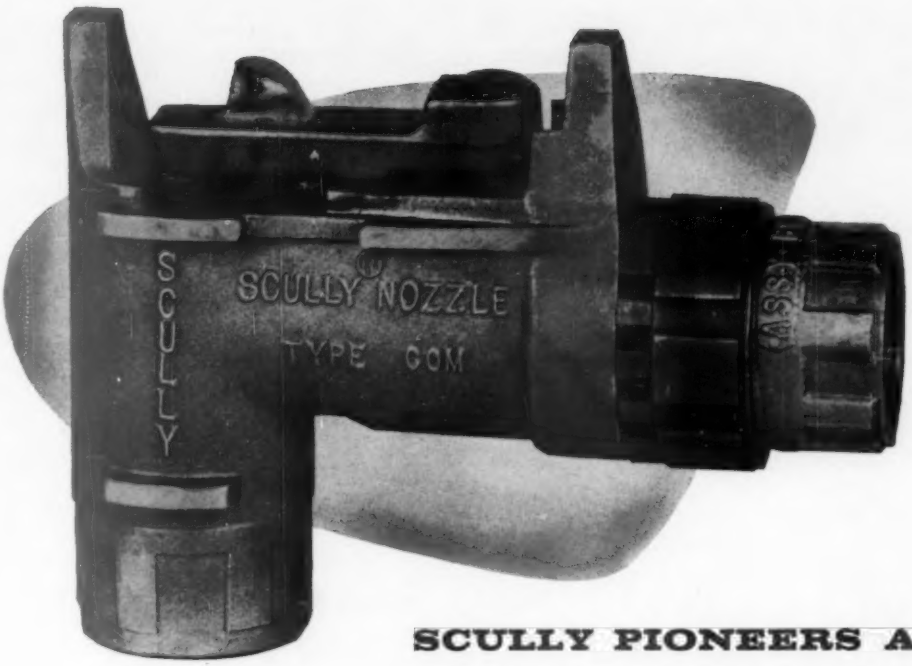
THE "LEAKS" PAGE this month is being written at Monterey, California, where the editor hopped out for a very brief chance to learn more about the oil industry's program to support the extra cost of oilheating installations for builders. It's a gathering of the Industry Advisory Council of the Pacific Northwest and they certainly can pick a spot. A corner room, two walls all glass with balconies both ways and not a tree has lost a leaf at mid-November; in fact it doesn't look like they plan to. In their growing years some of the trees were bothered with decisions, so the trunks go in one direction for a few feet and then another, ending up with several. Some are the twisted, gnarled cypresses common to this peninsula.

It's a nine acre hotel with lawns that apparently are trimmed with a Remington shaver. There are several buildings each just two stories and containing a couple dozen of these cushy glass domiciles. The customers who are not working are taking sun baths on the verandas. It's too early for the bar. The one strange note is the low purr of an electric heating unit built into the wall near the entrance.

Getting back East by Sunday will bring mixed emotions. It will be chilly and the trees bare but practically all the neighbors will be heating with oil which in turn will cause the magazine to get enough advertising to pay all of our salaries, and maybe save a little for another visit to a place like this.

THIS TIME we'll be gentle with the gas industry, because it was a plumber's error. In Crestview, Florida, this plumber connected a gas pipe to a water line. Three homes blew up, five were injured, none fatally. The whole town of 10,000 was quickly warned not to turn on the water.

Bob Gray



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fueloil & oilheat

by James M. Collins

WASHINGTON—A new and streamlined plan to handle oil imports is now expected to be issued by the government about Dec. 1, or soon thereafter—but it is not likely to contain many surprises.

Indications are that the total import "allowable" East of the Rockies (Districts 1-4) will be increased somewhat for crude oil and unfinished oils and cutback some on the West Coast, where the full flow of oil from Canada into the Pacific Northwest (now about 55,000 B/D, compared with about 22,000 B/D last spring) will be taken into account, in setting quotas for controlled imports from other areas.

In addition, the new program is expected to provide Interior Department somewhat more "flexibility" in administering the program. For example, procedures will be set up to take care of requests from the "newcomers" for import quotas, particularly of residual fuel oil. (Residual quotas in the first half of next year will be increased to take care of anticipated rises in domestic demand, particularly along the East Coast.) Officials deny that a "kitty" of products, and crude, will be set aside within the total amount which will be permitted for import, but the net effect is expected to amount to that. Rather than any rigid set of rules to take care of the newcomers, and to handle hardship cases, some broad procedure will be adopted that will permit the Oil Import Administration to handle such requests on a case-by-case basis. The rules for the Oil Import Appeals Board, also, probably will be loosened up so that they can make adjustments in quotas, which is now barred to a great extent under the President's proclamation. The proclamation, therefore, is also expected to be amended in the next several weeks, to permit changes in the regulations. Basically, however, there will be no big changes in the program, except for residual.

Gas Bill Is Revived

Interest is reviving in a bill to free gas producers of "public-utility" control of prices by the Federal Power Commission—but the odds against enactment of such legislation are still astronomically high.

Interior Secretary Seaton kicked off the new campaign in a speech to American Gas Association's meeting at Chicago when he said that the industry should now take the lead and push for legislation to bring order out of the present chaos in producer regulation.

But, just three weeks later, Frank Porter, president of the API, and Rep. Harris (D, Arkansas), chairman of the House Commerce Committee, took the opposite tack, warning that the Administration "from the top" must come out strongly for the bill, then push it actively, or there will be no new legislation.

Harris, in an important "ad lib," in his speech to API's transportation division meeting, also warned that he will not even consider another bill unless distributors take a leading role in urging enactment, and pipelines and coal men "resolve their differences."

It is possible, even probable, that the President will come out strongly again for a bill, in some message to Congress next January. Even distributors may decide to push legislation. But it seems highly unlikely that the interstate gas pipelines will ever give in to control over their sales of gas to industrial users. The pipeliners argue that they must be permitted to sell cheaply to industrial consumers during the summer when domestic demands are at a low level. Legislation that would deny such sales, they say, would make it difficult, if not impossible, to build gas pipelines with borrowed capital.

But, more important than the various hassles within the gas industry will be the attitudes of presidential hopefuls, now running hard for the White House. None of these, including Vice-President Nixon, or Senator Johnson (D, Texas), or New York Governor Rockefeller, will touch a gas bill with a ten-foot pole during the 1960 session of Congress. So, if there is to be any bill it will have to come in 1961 — and no one can now predict at all what will be the political situation then. Much will depend on who occupies the White House — and what is then the status of federal control.

Congressional Hearings Start

Biggest fuss in Congress next year is expected to develop over the oil and gas depletion allowance. It is not expected that Congress will cut this provision, but thousands of words will be spoken on Senate and House floors about it. Actual loss to producers is more likely to be in their public relations standing. House Ways & Means committee has kicked off hearings on "broadening the tax base" — with depletion discussed at a panel hearing on Dec. 1. Most of the panelists who are college professors attacked depletion allowances. Two oil men vigorously defended the 27.5% rate for oil and gas.

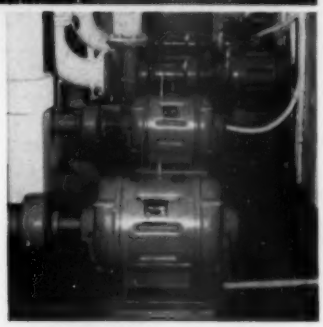
Roosevelt to Launch Probe

Of more direct concern to oil marketers will be the investigation to be launched in mid-December here by Rep. Roosevelt (D, Calif.), chairman of a House Small Business subcommittee. First phase will involve the major oil companies' policies on TBA items, tires, batteries and accessories. Next may come a probe into direct commercial sales by major suppliers — by-passing their jobbers and dealers. This probably will involve, primarily, gasoline, but it could also get into fueloil, as well.

Oil Compact Report is Delayed

The Justice Department's Oil Compact report is two months late now. In 1958, DJ almost recommended pipeline divorcement. Some are wondering if the 1959 report will go all the way — but chances are it will not.

Home Security Life Insurance Company Building, Durham, N.C., is equipped with B&G Universal Pumps. "The pumps couldn't be any quieter," says the plant engineer.



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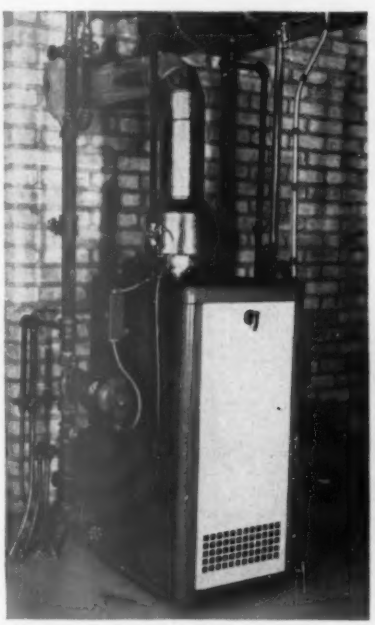
B&G Boosters and Universal Pumps are available in a wide range of capacities with 1/12 to 40 H.P. motors.



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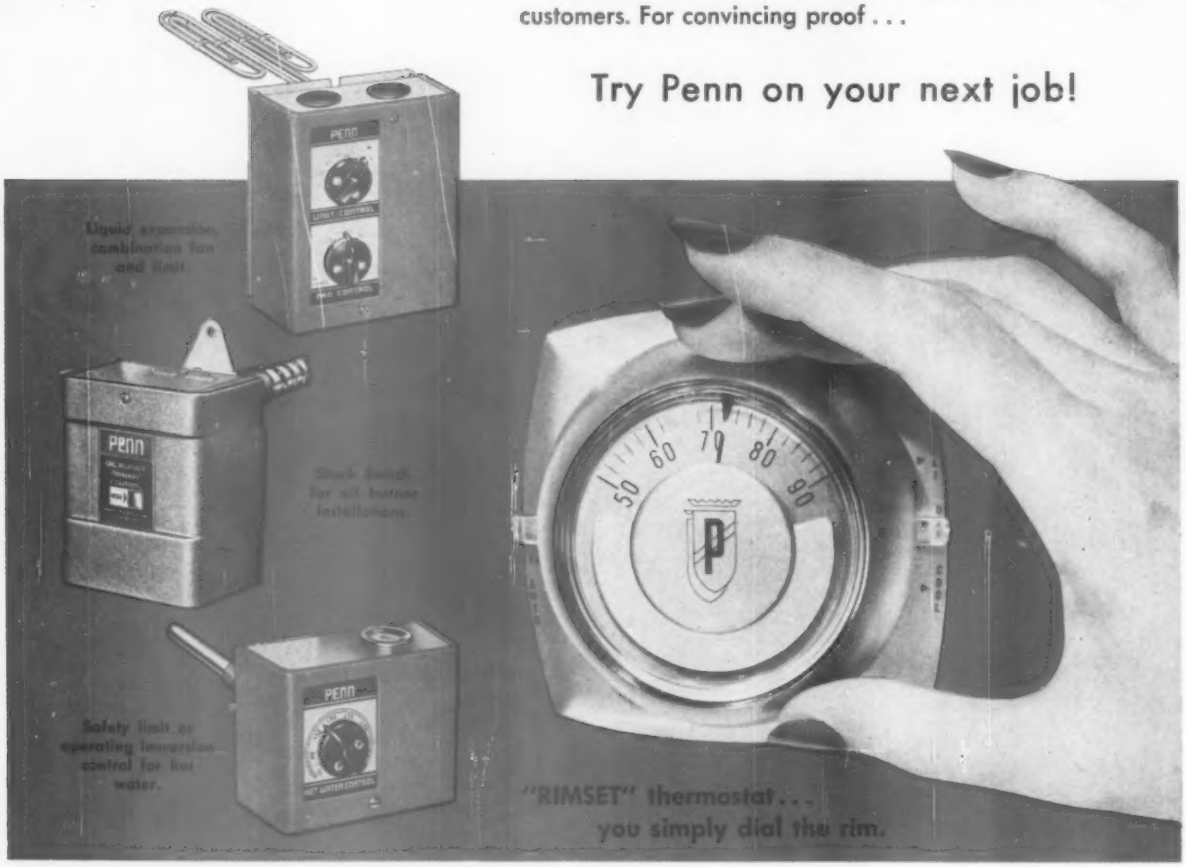

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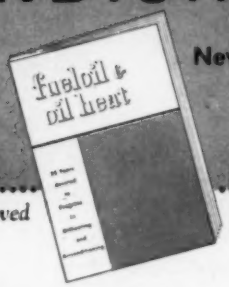

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Monthly Oilheating Trends

OCTOBER INSTALLATIONS of domestic oilheating equipment swing back into the plus column after that September notch in our curve. Installations for the month are estimated at 87,168 which is 10% above last year's 79,295.

For the first ten months of the year, the estimated total is 525,502 or 11% above last year's 472,476, the revised figure for that period.

The October installations were divided: New Homes, 23,646; Replacements of old oilheating, 25,652; and Conversions from other fuels, 37,870. For the full ten months: New Homes are estimated at 164,222; compared with 158,129 last year; Replacements were 178,341 against 139,431; Conversions from other fuels, 182,939 vs. 174,916.

Oilheating dealers in October installed approximately 1,815 central airconditioning jobs most of them naturally in connection with new home installations where they also supplied heating.

During the month they installed an estimated 2,782 oilfired water heaters with power burners.

October Minimum Retail Prices Key Dealers

	Oct. Avg.	*Sept. Avg.*
Separate Burners	$313	$315
Boiler Burners	742	738
Furnace Burners	621	617

Price Index: Separate Burners 1947-49 is 100%

WHOLESALE			
October	94.6	Six months ago	93.2
September	94.7	Year ago	96.0

RETAIL			
October	92.1	Six months ago	92.2
September	92.2	Year ago	93.1

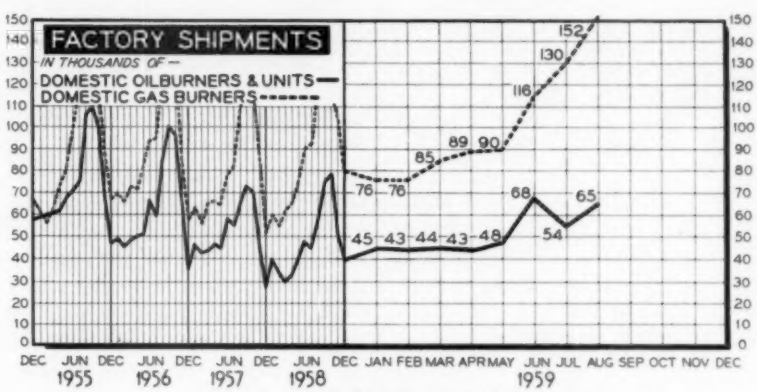
In some parts of the country, particularly in Connecticut and Long Island, the dealers have done quite a successful job in pushing the water heaters by direct specialty selling methods. It is well to keep in mind that an oil-powered water heater firing at 1 gph will produce four times as much hot water as the typical gas heater installed in most homes.

Oilheating Stocks: At the end of October, dealers were holding approximately 65,210 domestic burners and units compared with 50,636 at the end of September and with 72,418 a year earlier. Just why October stocks increased over September is not easy to see, but it is probably because sales picked up during October giving dealers more confidence to build inventory. Also, they may have been hedging against a longer steel tie-up.

Dealer stocks were divided: Separate burners, 35,865; Boiler burners, 12,389; and Furnace burners, 16,956.

Factory stocks at the end of August, the latest available figures, were 52,253 compared with 43,277 on the same date last year.

Tank Stocks: Dealers were holding approximately 38,759 consumer oil tanks at the end of October compared with 26,406 a month earlier and with 26,750 a year earlier.

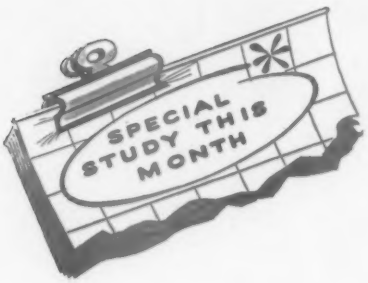


Shipments of Oilburners and Units
(Including Exports)

Adjusted to include manufacturers other than those reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	AUGUST			EIGHT MONTHS		
	1959	*1958*	*Percent Change**	*1959*	*1958*	*Percent Change**
Separate Burners	44,343	36,368	+21.9	290,542	213,629	+36.0
Boiler Burners	4,023	4,503	—10.7	28,851	24,902	+15.9
Furnace Burners	16,437	17,622	— 6.8	92,736	89,013	+ 4.2
All Domestic	64,803	58,493	+10.8	412,129	327,544	+25.8
Commercial	4,074	3,643	+11.8	26,541	22,076	+19.8
Total	68,877	62,136	+10.8	438,580	349,620	+25.4

*The 1959 figures are not directly comparable to 1958 since the Census Bureau changed its base from which total shipments are estimated by them.



How much did the steel Strike affect oilheating industry Sales?

NOW THAT THE steel strike has been temporarily settled there are indications that our industry has been hurt to a modest degree along with others. This applies to any industry like ours that uses a lot of steel.

First we asked the group this month if the steel strike in any way retarded their sales of oilheating installations. Voting yes were 22% from the country as a whole with the strongest impact in Mid-Atlantic states at 29%.

A much stronger impression was expressed, however, on the subject of unemployment with 54% of the companies saying that unemployment was increased by the strike. These companies are speaking, of course, of general employment rather than just the steel mills.

The Mid-Atlantic voted 54% on this point, with the Midwest even higher at 60%.

Burner shortages

When we asked the reporting dealers if they encountered any actual shortage of principal oilheating items, we find that 11% failed to get enough warm air furnaces; 8% were short on boilers; and 5% had too few separate burners.

On the other hand, when we asked how many oilheating jobs they lost to other companies just because they could not get equipment in time, only 4% of the dealers lost any business this way and typically they lost only one or two jobs. This indicates that the shortage was fairly general in markets where it existed, but was still rather insignificant.

There was an important problem with tanks since 27% of the companies report difficulty in getting tanks . . . obviously because they didn't like to pay the inflated prices. Our group at the start of the steel strike back in July was paying an average $30.25 for a 275 gal. basement tank. At the end of October, the same dealers were paying an average of $37.89 or about a 25% increase.

Even so, a lot of them were building stocks at the end of October before the prices got any worse. In New England, October tank prices hit a peak of $75 with one dealer and several others were in the $45 to $50 range. The Mid-Atlantic states had one dealer paying $65 and several others paying as much as $50. The highest Midwest report was $40.

Collections Slowed

The steel strike, because it affected many industries, had considerable bearing on collections. We find 12% of the companies saying their collections were slowed down very seriously; 40% say they were slowed moderately and the other 48% saw no particular effect on this point.

The Midwest, naturally, was hit hardest on collections with only 25% saying that they noticed no let down.

Apart from the tanks, the reporting dealers list quite a lot of other items that were scarce and consequently higher priced. The strongest scarcity group was in iron and steel pipe and pipe fittings with 28% of the dealers saying they had real trouble in this direction. Only 19% reported trouble with duct work and sheet metal in general, although most folks had expected to be hurt most on this item.

Other scarce or inflated items reported by just a few dealers were baseboard radiation, copper pipe and tubing, BX-wire and truck tanks. The copper pipe trouble was obviously caused by labor problems facing that industry.

The final question asked the dealers whether they believed that any sales lost or retarded by the strike would be affected by better sales later. Only 15% voted yes on this point which is not necessarily an unfavorable conclusion because so few of the dealers had reported any real losses due to the strike condition.

Oilheating men have some rather definite opinions about this strike and in fact strikes in general as disclosed by these typical comments.

Dealers Comment

"The employees and the companies are both hurt in the strike; there is a limit to what any company can get for their product." . . . "The steel strike is just hitting us now, we will know more in thirty days." . . .

"Having fair stock on hand kept everything pretty normal; what could happen in the near future is beyond me at this point." . . . "When the strike started we bought enough tanks and boilers to last us to January 1." . . .

"It's disgusting!" . . . "We should give the working man a chance to vote secretly to go on strike." . . . "Some increased costs will result from the steel strike—what else?" . . . "We are willing to go along with the steel companies if they stick together and gain their points, particularly on featherbedding." . . .

"The government should straighten out all unions." . . . "We hardly noticed the strike." . . . "Continuance of the strike following the 80-day Taft-Hartley injunction might affect our supply of boilers and tanks." . . . "As far as we can tell, we weren't affected." . . .

"The effects have been extremely serious—we just installed ductwork made in India and used Belgian nails in construction. It would seem that the industry has lost; the steel union has lost; the American people and the economy have lost." . . .

"The strike is having a bad effect

on our local economy—no money!" . . . "Steel workers in our area are not in sympathy with the strike." . . . "This strike has drained the purchasing power of a lot of local people, and I look for an indefinite postponement of some contracts with these folks."...

"No trouble up to now, but we expect that we will be affected very seriously from now on." . . . "The increase in the cost of tanks will make it more difficult to sell against gas as it widens the margin between gas and oilfired equipment." . . .

"It has not hurt us so far, but it will—even though Taft-Hartley puts them back to work, it will not straighten out the situation for months to come." . . .

"We carry a good stock in our warehouse, but it will be tough from now on." . . . "Our marketing area has not yet been affected; if you ask these same questions a month from now we might have to give different answers." . . . "It's a deplorable situation when a man can throttle and threaten industry and the nation's economy; the steel workers can never make up their losses; we should all press for more rigid strike controls." . . .

"Lincoln once said that a house divided cannot stand—all of us get hurt when union and management have a battle of wits." . . .

Oilburner Permits*

OCTOBER 1959		10 MONTHS 1958	1959
3	Albany, N. Y.	26	17
55	Baltimore, Md.	331	269
91	Bridgeport, Conn.	645	565
6	Columbus, O.	29	61
..	Brooklyn	4,340	..
42	Detroit, Mich.	279	272
74	Elizabeth, N. J.	338	381
10	Freeport, N. Y.	132	120
16	Hartford, Conn.	468	536
25	Irvington, N. J.	152	192
..	Meriden, Conn.	383	..
33	Milwaukee, Wis.	389	249
..	Minneapolis, Minn.	157	..
16	Montclair, N. J.	120	93
7	Morristown, N. J.	..	30
40	Mt. Vernon, N. Y.	292	341
..	Newark, N. J.	728	..
59	New Bedford, Mass.	488	501
..	New Haven, Conn.	275	..
..	New Rochelle, N. Y.	120	..
33	Norfolk, Va.	276	208
3	Omaha, Neb.	47	49
11	Orange, N. J.	94	50
9	Passaic, N. J.	69	52
39	Paterson, N. J.	202	205
191	Philadelphia, Pa.**	1,172	1,014
93	Portland, Me.	428	461
116	Portland, Ore.	1,474	971
22	Poughkeepsie, N. Y.	66	97
41	Providence, R. I.	361	310
11	Richmond, Va.	309	300
112	Roanoke, Va.	932	675
64	Rochester, N. Y.	502	430
10	Rockville Centre, N. Y.	43	43
55	Salem, Mass.	246	258
83	St. Louis, Mo.	1,028	501
13	St. Paul, Minn.	53	65
4	Schenectady, N. Y.	30	57
58	Spokane, Wash.	..	..
135	Springfield, Mass.	697	673
10	Stamford, Conn.	101	141
61	Washington, D. C.	396	286
22	White Plains, N. Y.	149	128
20	Wilmington, Del.	145	111
138	Worcester, Mass.	679	683
27	Yonkers, N. Y.	196	..
	Matched Totals	13,188	11,365
	Percent Change		—13.8

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

**Courtesy of "Philadelphia Inquirer."

OHI Exposition Space is two-thirds Sold

R. S. (SHEP) DOHERTY, A. W. Cash Valve Mfg. Co. and chairman of the 23rd National Oil Heat and Air Conditioning Exposition predicts that the Show sponsored by the Oil-Heat Institute of America will be a complete sell-out.

The Exposition will be held in the New York Coliseum, April 4 to 6, while the 38th Annual Convention of the OHI of America is held at the Park-Sheraton Hotel. Exhibitors have already reserved two-thirds of the available floor area allotted for booths.

To insure a high dealer attendance several trips will be aranged to make it easier for members of the Distribution Division to attend. These tours will include transportation, hotel accommodations and similar expenses in one inclusive total.

In previous years 77% of the attendance at the Show has been made up of equipment dealers, plumbing, heating and airconditioning contractors, installation companies, distributors and jobbers of equipment, major oil companies, fueloil wholesalers, distributors and dealers, bulk plant and terminal operators. Another 13% consisted of architects, builders, contractors, consulting engineers, government building officials, loan agencies and real estate managers. The remaining 10% have been manufacturers—their engineers, import-export representatives, trade associations, and the press.

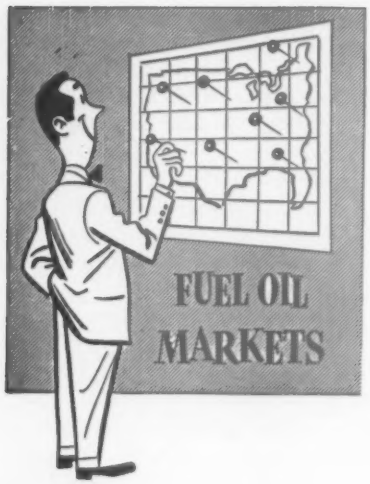
Companies interested in displaying their products before this audience should contact Ralph Becker at OHI headquarters, 500 5th Ave., New York 36, N. Y.

Where is the

New home Market?

	No. of Permits Issued August	8 Mos.
Alabama	1,238	13,646
Arizona	2,075	16,515
Arkansas	147	2,313
California	20,889	164,736
Colorado	1,300	10,532
Connecticut	1,392	11,887
Delaware	248	1,592
District of Columbia	55	574
Florida	7,183	55,910
Georgia	1,872	14,963
Idaho	228	1,367
Illinois	4,138	39,286
Indiana	1,798	11,752
Iowa	737	5,667
Kansas	928	6,905
Kentucky	849	6,199
Louisiana	1,721	11,557
Maine	102	744
Maryland	2,600	19,990
Massachusetts	1,739	13,981
Michigan	3,887	26,829
Minnesota	1,616	12,382
Mississippi	271	2,298
Missouri	2,921	22,660
Montana	138	1,275
Nebraska	686	4,933
Nevada	357	2,392
New Hampshire	111	1,082
New Jersey	4,795	25,263
New Mexico	603	6,044
New York	7,662	68,047
North Carolina	1,121	9,377
North Dakota	372	1,544
Ohio	5,121	37,552
Oklahoma	890	7,271
Oregon	711	5,881
Pennsylvania	2,601	26,780
Rhode Island	298	1,807
South Carolina	380	3,128
South Dakota	151	1,342
Tennessee	1,419	11,463
Texas	6,090	54,004
Utah	702	5,547
Vermont	33	155
Virginia	2,346	20,024
Washington	1,818	16,442
West Virginia	351	2,594
Wisconsin	1,640	13,100
Wyoming	139	915

Greater detail on permits within the individual states is included in a booklet, "New Dwelling Units authorized by local Building Permits," issued monthly by the Bureau of the Census, U. S. Dept. of Commerce, Washington 25, D. C.



ANY COMMENT on degree days this early in the season is academic since the volume of oil affected through the end of October is pretty small. In the whole area East of the Rockies, the combined September-October degree days were 1.8% above normal and 4.5% above last season.

However, there were sharp sectional differences. The East Coast had 3.6% fewer than normal degree days and 18.8% fewer than last year. The Midwest on the other hand had 14.5% more than normal degree days and 36.1% more than last year . . . all of these being weighted by volume in markets surrounding the weather spots used.

The price table based on November 10 brings very little change from a month earlier. The tank car price at Minneapolis is up a half cent and the tank wagon price at Milwaukee is down a half cent.

Primary stock levels on November 6 were nearly 10% above last year in the area East of the Rockies with the East Coast running 20% higher. The industry has been expecting considerable correction to the surplus durin the month of November.

Distillate Fueloils

PRIMARY STOCKS*
(Thousands of Barrels)
East of Rockies

	Nov. 13 1959	Nov. 14 1958
East Coast	75,846	63,413
Midwest	51,457	54,303
Gulf Coast	34,315	29,405
Total	161,618	147,121

*American Petroleum Institute.

No. 2 Heating Oil (Including No. 3 & PS200)

Price per gallon as of November 10, 1959

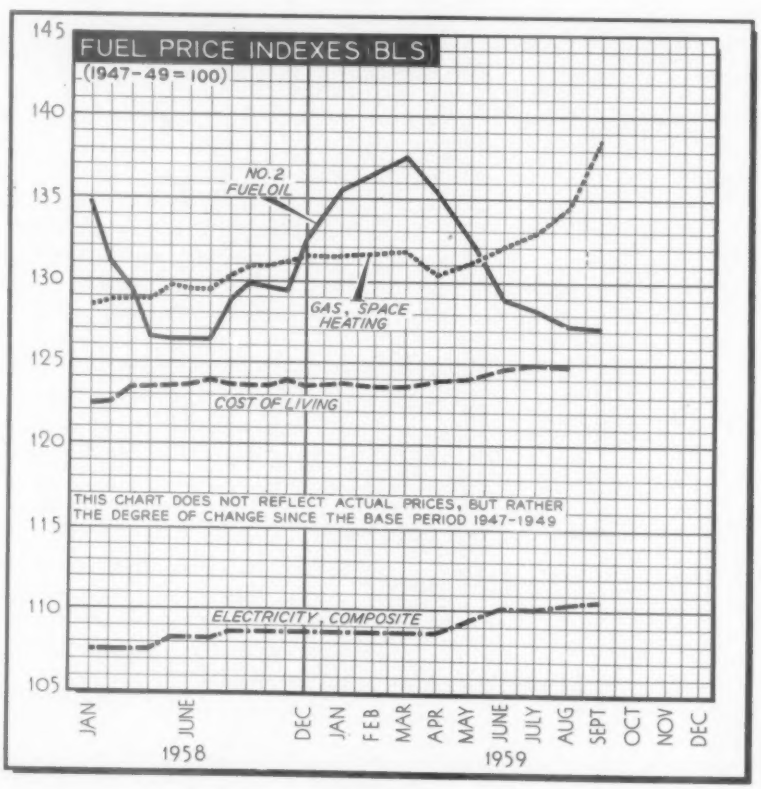
	Tank Car†	Tank Wagon
Portland, Me.	10.0(A)	14.6
Boston	9.9(A)	14.4
Providence	9.9(A)	14.1
Hartford	10.15(A)	14.2
New Haven	9.8(A)	14.3
Syracuse	10.6	14.6
Albany	9.5	14.0
New York	9.8(A)	13.7
Newark	9.8(A)	13.8
Philadelphia	9.8(A)	13.9
Baltimore	9.8(A)	14.1
Wilmington, N. C.	10.1(A)	13.7
Washington	10.1(A)	14.4
Richmond	10.2(A)	13.8
Charleston, S. C.	10.1(A)	13.43
Chicago	9.625*	14.1
Detroit	10.25*	15.1
Cleveland	11.10*	15.6
Minneapolis	10.179	14.2
St. Louis	10.10*	14.9
Indianapolis	10.39*	14.9
Milwaukee	10.225*	14.4
Des Moines	10.55	14.7
San Francisco	12.05	14.8
Portland, Ore.	12.1	15.1
Seattle	12.2	15.2
Spokane	13.8	16.8
Los Angeles	11.55	14.3

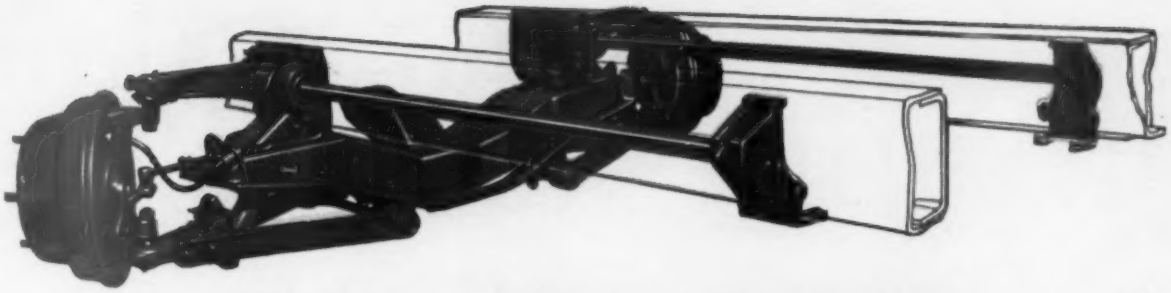
Tank wagon prices shown are for maximum one-time delivery discounts.
*Delivered.
(A) .50¢ vol. allowance.
†Tank car prices are typically those paid by fueloil distributors as a purchase price. On the West Coast this term more often indicates a retail sale to a large commercial account. This often is a half cent below tank wagon price.

Degree Day Table

OCT. 1959		Sept.-Oct. Normal	Sept.-Oct. 1959
423	Albany AP	582	566
121	Atlanta AP	118	129
191	Baltimore CO	236	219
319	Boston AP	392	398
388	Buffalo AP	555	499
153	Charlotte, N. C. AP	154	155
406	Chicago AP	440	468
283	Cincinnati CO	264	318
348	Cleveland AP	415	426
73	Dallas AP	53	73
518	Denver AP	545	709
471	Des Moines AP	454	602
408*	Detroit AP	477	500
492	Grand Rapids AP	606	601
394	Hartford AP	485	509
652	Helena AP	937	1003
7	Houston AP	7	7
371	Indianapolis AP	385	425
289	Kansas City AP	284	333
2	Los Angeles CO	58	2
241	Louisville AP	283	252
529	Milwaukee AP	562	646
634	Minneapolis AP	616	786
13	New Orleans CO	5	13
244	New York CO	302	284
433	Omaha AP	419	548
235	Philadelphia CO	252	263
285	Pittsburgh CO	354	340
522	Portland, Me. AP	714	703
234	Portland, Ore. CO	365	348
354	Providence AP	488	455
238	Roanoke, Va. AP	283	266
258	St. Louis AP	278	288
422	Salt Lake City AP	469	592
73	San Francisco CO	238	146
686	Sault Ste. Marie AP	937	917
328	Seattle CO	463	495
470	Toledo AP	489	568
195	Washington AP	274	223

*City Office.





CHEVROLET'S REVOLUTIONARY TORSION-SPRING RIDE

the most significant new truck development in decades!

Years of intensive engineering achieved a revolutionary result—a totally new truck suspension system. The most exhaustive chassis engineering program in trucking history proved conclusively that, from the standpoints of both ride and durability, the finest possible truck suspension system would consist of independently suspended front wheels with torsion bar springing. Advancing on this principle, Chevrolet engineers proceeded through years of development to produce a completely new system for the 1960 Chevrolet truck product.

New Torsion-Spring Ride—how it works. The revolutionary result of Chevy's all-out engineering effort—Torsion-Spring Ride—eliminates both the old-fashioned I-beam front axle and friction-producing front leaf springs. Each front wheel, suspended independently of the other through tough control arms and low-friction linkage, is free to step cleanly over bumps without jarring the entire truck. Also, friction-free torsion bars on either side of the chassis, specially mounted to provide a twisting action, work to absorb each jolt; they flex freely to soak up all kinds of shocks, from the smallest to the most severe.

Three new rear suspensions, tough and tailored to the truck, are completely redesigned to complement the independent front suspension in every weight class.

M70 tandem proves its stamina on year-long test of durability.

Here's a ride that lets you get more work done in a day's time! Take a '60 Chevrolet truck over a rough stretch of back road and feel the absence of I-beam shimmy and wheel fight. Chevy's torsion springs soak up jolts and jars that would shake the headlights off an ordinary I-beam rig. You move along with maximum payloads at higher safe cruising speeds. You make your tough off-the-highway runs in less time, improving your ton-mile-per-hour rate as much as 100%.

A ride that shows respect for the driver and the load! Out at the GM Proving Ground, the test drivers will take a torsion-spring Chevy any day over an I-beam truck—even if they have to drive it twice as far. The ride's that much better; that much safer. The load, too, has an easier time of it. There's far less bounce and jounce, less danger of damaging fragile cargoes.

A ride that adds extra thousands of miles to the truck's working life! You can be sure the shockproof action of Chevrolet torsion-spring ride means lower maintenance costs. As much as 78% of all objectionable road shock and vibration is absorbed before it can be transmitted to the truck's body and sheet metal. Chevy trucks stay new-looking a whole lot longer and their working life is increased by extra thousands of miles.

Once you've experienced the incredible smoothness of a torsion-spring ride, you'll realize that Chevrolet has set off a full-scale revolution with the introduction of its '60 models. By throwing away the old-fashioned I-beam in favor of independent front suspension, Chevy's new design has improved virtually all phases of truck performance. Drive a new one just once. That's all we ask. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

1960 CHEVROLET STURDI-BILT TRUCKS

CHEVROLET

fueloil & oilheat

for steam, hot water (Hydronic) or convector radiators

MAID-O'-MIST AUTOMATIC HUMIDIFIERS

Original in design . . .
Low in cost . . .

On low pressure steam systems—

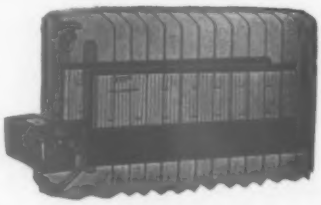
AUTO-VENT® automatic HUMIDIFIER No. 95

Here's the inexpensive, efficient, QUIET way to keep the air freshened and comfortable. It discharges 1 pint of water vapor per hour at 1 lb. steam pressure . . . enough for 2000 cu. ft. Easy to install . . . just remove air vent valve from radiator and screw No. 95 in its place.

No. 95 4½" high, 2¼" diameter.

On hot water or steam radiators

OL' FAITHFUL® automatic HUMIDIFIER



Heavy copper twin troughs, each 5/16" wide by 2" high are concealed in loops inside the radiator sections from the side. A constant water line is maintained automatically in the troughs by a float controlled water valve. Patented corrugated evaporator pads extend 3" above water line in troughs.

Ol' Faithful uses water from radiator on hot water radiators, or from nearest supply on steam installations.

Three sizes: 18", 24" and 34" lengths.

Complete range of sizes!

OL' FAITHFUL® HUMIDIFIERS

For either cast iron or copper convector radiators . . . 5 lengths, 2 and 4 water troughs. Constructed of heavy copper, the water troughs are ⅜" wide, spaced 1" apart for unrestricted air flow. Each trough is automatically supplied with water from radiator by No. 59 float control valve. On steam installations, water is taken from nearest supply thru copper tubing. Shipped assembled.

WRITE FOR NEW CATALOG

MAID-O-MIST Inc.

MAID-O'-MIST, Inc.

3217 NORTH PULASKI ROAD · CHICAGO 41, ILL.

Names in the News

Robert O. Goodykoontz, general manager of marketing, has been elected to the board of directors, Esso Standard Oil Co. He has been with the company since 1930 and has served as manager of the company's Virginia Division and as assistant general manager of marketing before becoming general manager last May.

Goodykoontz

Also elected to the board were *J. Prince Warner*, general manager of manufacturing, and *Frederick P. Hagaman*, controller.

Earl L. Bedard has joined the engineering staff, Heating Equipment Division, Iron Fireman Manufacturing Co., Cleveland. He has had an extensive background in all phases of heating and combustion controls.

M. R. McLary has been elected executive vice-president and manager, Ingersoll Products Division, Borg-Warner Corp., Chicago. He has been with Ingersoll since 1952 and has filled several managerial assignments including director of engineering and research, production manager, and works manager.

Herbert V. Peterson, vice-president and treasurer, Hartol Petroleum Corp., has retired after 36 years of service. As the firm's first employee he has been connected with every phase of operations. As an officer he took a prominent part in the formation of the subsidiary companies.

(*Please turn to page 92*)

at your finger tips...

A Complete Line of Gas and Oil Horizontal Furnaces. New Gas Unit is pictured with Duct Type Evaporator Coil.

A Complete Line of Gas or Oil Fired Basement Type Winter Air Conditioners. Available in new Completely Assembled and Wired Oil Units.

Gas and Oil Fired Counterflow Units. Pictured with new Counterflow Evaporator Coil.

more . . .
and more
profitable
heating and
cooling business

Gas and Oil Fired Upflow Units. Pictured with unique Circular Evaporator Coil.

● The BIG Line. The COMPLETE Line. The line that combines premium construction with extra-competitive pricing. The line that is backed by 65 years of manufacturing experience and as many years of customer satisfaction. This is today's Moncrief Line, available from your nearby Moncrief Wholesaler who carries your unneeded stock in his warehouse. If you are looking forward to increased profits in the coming year, you will find it advantageous to call your Moncrief Wholesaler, now!

MONCRIEF

Combination Year 'Round Air Conditioner — Gas or Oil Fired — Air or Water Cooled

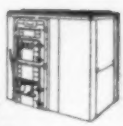
Air Cooled Condensing Unit 2, 3 or 5 H.P.

(1) Round Plenum-Type Evaporator Coil
(2) Duct-Type Evaporator Coil
(3) Counterflow Evaporator Coil
(4) Air-Handling Blower-Coil Unit

Gas Conversion Burner 3 Models

Gas Unit Heater 5 Models

Gravity Furnace Gas, Oil or Coal



Coal Winter Air Conditioner

THE HENRY FURNACE COMPANY • *Medina, Ohio*

HEATING AND AIR CONDITIONING UNITS — MONCRIEF SINCE 1895 — FURNACE PIPE AND FITTINGS

fuel oil & oil heat

A Contamination-Free Product

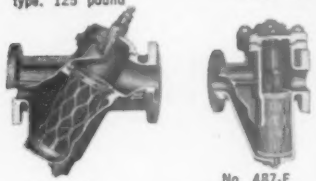
Protect pumps, meter, product

No. 187
Bottom Outlet Type

WITH OPW
line strainers

No. 187-F
Bottom opening type. 125 pound

No. 387
Top outlet type. 125 pound.



No. 387-F
Top outlet type flanged. 125 pound.

No. 487-F
Top outlet type flanged. 200 pound.

OPW Line Strainers remove dirt, scale, rust and other solids from liquids flowing in any pipe line system. This positive screening-out process protects and prolongs life of pumps, meters, loading valves, and mechanical equipment. Pipe-snug fit of cage and screen, plus larger than pipe size screen area, assures *free* and *complete* flow of product through strainer. Screens can be quickly and easily removed for periodic check-ups, cleaning and replacement.

Bulletin F-36R gives full details on sizes, styles, screen mesh, etc. Write today.

OPW CORPORATION
2723 Colerain Avenue PHONE
Cincinnati 25, Ohio KI 1-5400

Esso opens research Center located at Florham Park

A SCIENTIFIC center located on a 675-acre site in Florham Park, N. J., was dedicated on November 5 by Esso Research and Engineering Co.

The facilities represent the biggest expansion in the company's history and include three structures housing some 800 engineers, scientists and aides. Initially the center will be devoted to engineering and oil processing research. Headquarters activity and other research will continue at the company's 20-building research facility in Linden, N. J.

Governor Robert B. Meyner of New Jersey and top executives from the company took part in the dedication. These included President Eger V. Murphree of Esso Research and Marion W. Boyer a Jersey Standard director.

Boyer, who spoke at a luncheon, pointed out that Esso Research originated in 1919 as a department of the parent company, with a staff of 26 persons. Today Esso Research employs more than 3,000 persons, one-third of whom are technical people.

Boyer also observed that research and engineering technology are reducing capital costs by about 5% per year and that engineers at the new center are planning and supervising some $350 million worth of refinery construction and modernization around the globe.

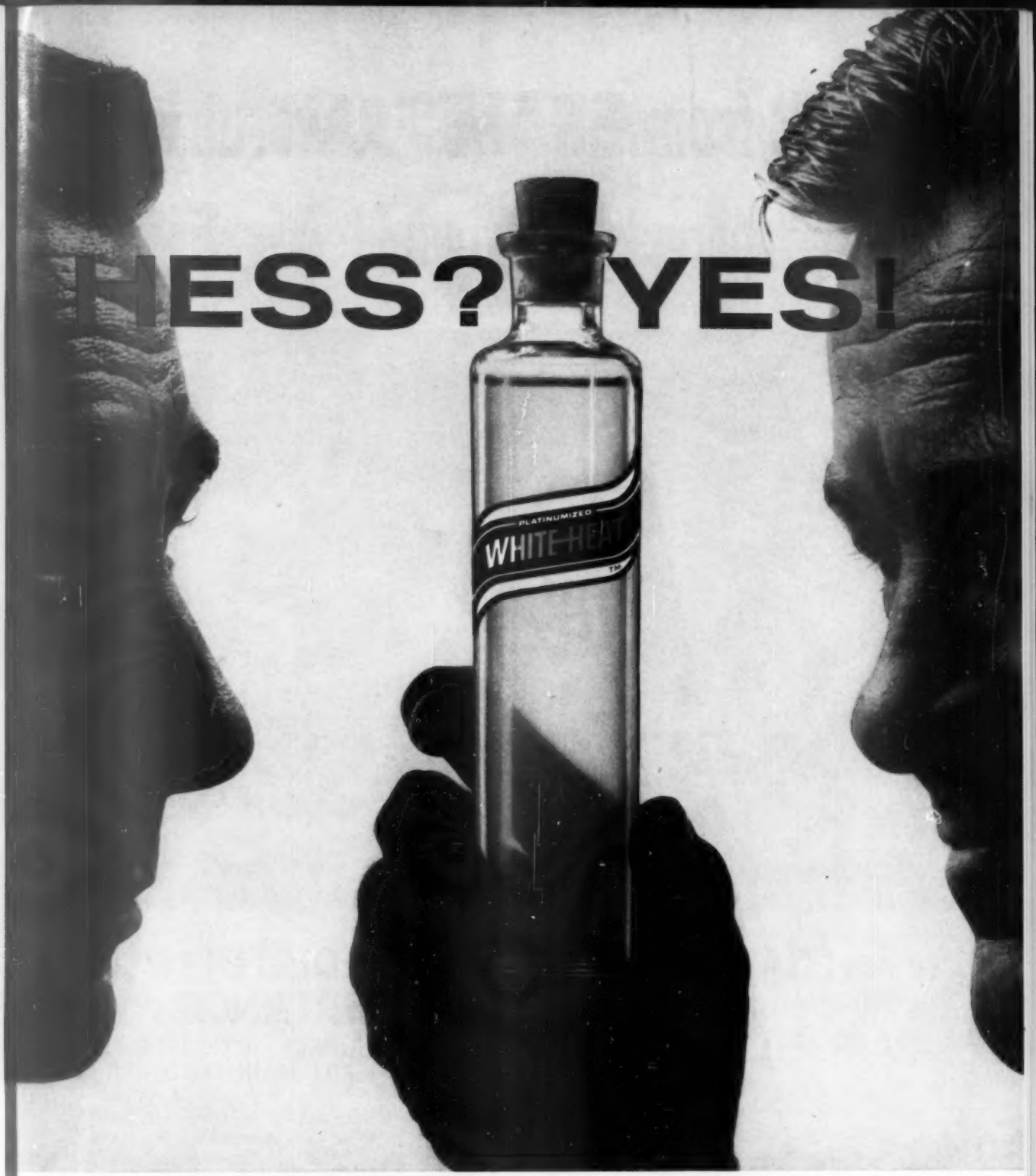
The largest structure at Florham Park is an office building primarily for engineering personnel. Another building is for mechanical and other services and a third is the Process Research Building with an 11,000 sq. ft. bay area almost four stories high. In this area new processes and improved versions of old ones are "scaled up" into pilot plant units.

Catherine Woodbury feted by oilheating Associations

FRIENDS, competitors, nationally prominent figures in the oil industry and members of the Massachusetts Oil Heating Association gathered to honor Catherine Y. Woodbury, C. Y. Woodbury, Inc., Quincy, Mass. The testi-

(*Continues on page 22*)

Head table guests at the tribute to Catherine Y. Woodbury, "First Lady of the Fueloil Industry" included: Standing left to right: Bill Hall, Bob Gray, Archie Gould, Francis Coan, Bill Wildes, Thomas F. Gorman, E. M. Woodbury and Joe Hernon. Seated: Fred Heaney, Mrs. Woodbury, and Mayor Amelio Della Chiesa.



Definitely! No two ways about it! It has to be HESS PLATINUMIZED WHITE-HEAT. No other! For no other home heating oil is so clear . . . so pure . . . so clean! So low in carbon . . . sulphur . . . residue. So high in quality . . . in heating performance . . . and most important, so immediate in customer acceptance! No buts about it – it's the only uncracked, straight-run home heating oil. So pure it needs no additives. That's why you make less service calls with WHITE-HEAT. That's why you make more profit on your service contract operation! So why not do as more and more dealers are doing? Open your sales talk with WHITE-HEAT. You'll close with the customer's "Yes!"

PLATINUMIZED WHITE HEAT—THE BRAND TO BUILD YOUR NAME ON!

Hess, Inc., State St., Perth Amboy, N. J. • VAlley 6-1000

TERMINALS: PERTH AMBOY, N. J.* • EDGEWATER, N. J. • PORT READING, N. J.* PENNSAUKEN, N. J.* • WOODBRIDGE, N. J.* • NEW HAVEN, CONN. • ALSEN, N. Y. RENSSELAER, N. Y.* • ROCHESTER, N. Y. • SCRANTON, PA.* • BALTIMORE, MD.*
HESS FUEL OILS, INC.: JACKSONVILLE, FLA. • PORT EVERGLADES, FLA.
HESS TERMINAL CORP.: HOUSTON, TEX. • NEW ORLEANS, LA.
*WHITE-HEAT TERMINALS

NOW from FRAM®. . . world leader in FRAM permachem treated Air Filters

NEW FRAM permachem treated AIR FILTERS

Kill 99+% of the germs that breed in filters. • Stop mold, mildew, musty filter odors • Hold up to 34% more dust in AFI test procedures • Exclusive anchor-locked frame cannot settle, vibrate, blow, or soak loose • In sizes for all forced air furnaces and air conditioners, also rolls and pads.

IMMEDIATE ACCEPTANCE BY ORIGINAL EQUIPMENT MANUFACTURERS

Eleven leading manufacturers of air conditioning equipment have already selected FRAM permachem treated Air Filters for use in their 1960 models. (Their names will be announced in December.) FRAM's sensational plus features will be promoted by these manufacturers in their sales and merchandising programs.

in filtration . . . the sensational new that make big profits for you!

POWERFUL ADVERTISING
FEATURES THIS SEAL

Big-space ads in national magazines including THE SATURDAY EVENING POST, newspapers, and radio are telling your customers about the advantages of FRAM permachem treated Air Filters. Merchandising aids featuring FRAM permachem treated Air Filters are being used by original equipment manufacturers and are available to you.

"YOU'VE NEVER MADE SUCH PROFITS

from air filters before," says Theodore F. Low, President of Sims Corporation, Providence. "You can't miss with Fram's profitable pricing policies, selective distribution, merchandising support, and Fram's famous money-back guarantee."

GET THE FACTS TODAY! Write **FRAM CORPORATION Dept. FAC Providence 16, Rhode Island**

Webster Booster pumps supply one or more overhead furnaces not to exceed combined firing rate of: Type 2R131-15 GPH.
2R233-30 GPH.

assured!

oil aplenty
15 feet above the tank . . .
35 feet above the pump!

WEBSTER *Booster* PUMPS

There's one sure way to provide an adequate supply of fuel oil for one or more overhead furnaces . . . install a Webster Booster pump! Developed to meet high lift requirements, these big capacity, *dependable* Websters lift oil 15 feet from a storage tank and discharge it 35 feet or more *above* the pump! Assures an ample oil supply at all times.

Webster Booster pumps are available in 15 and 30 GPH sizes. Both can be used as continuous or intermittent duty transfer pumps for filling small overhead feeder tanks or for other transfer purposes. More, Websters are kitten-quiet — no hum or vibration. And, they're equipped with the exclusive rotary filter that eliminates wire mesh strainers, ends cleaning problems forever.

WRITE FOR BULLETIN FU3-1 for complete specifications and installation data.

HEATING DIVISION
WEBSTER ELECTRIC
RACINE · WIS
our 50th year

Pamphlet adv. A-131

monial dinner was held on November 12 in Dedham, Mass.

Fred Heaney, president of the Oil-Heat Institute of America, Inc., New York, presented Mrs. Woodbury with OHI's Igniter award—making her the only woman in the industry to be so honored.

Francis Coan, president, Massachusetts Oil Heating Association, gave her a plaque and a charm bracelet in recognition of her contributions to the industry and the Association.

Mrs. Woodbury has been selling and installing oilheating equipment since 1932. She has received a certificate in heating engineering from M.I.T., and has seen her firm grow from a one-woman operation to a company staffed by 17.

Speakers at the banquet included Mayor Amelio Della Chiesa, Quincy, and Thomas F. Gorman, chief of the Quincy Fire Department.

Builders Show scheduled for January in Chicago

SOME 450 manufacturers will fill the exhibit space at the Conrad Hilton and Sherman hotels and the Chicago Coliseum when the National Association of Home Builders meets for its show and convention in Chicago, January 17-21.

According to Paul S. Van Auken, NAHB's convention and exposition director, both exhibit space demand and advance registrations set new records.

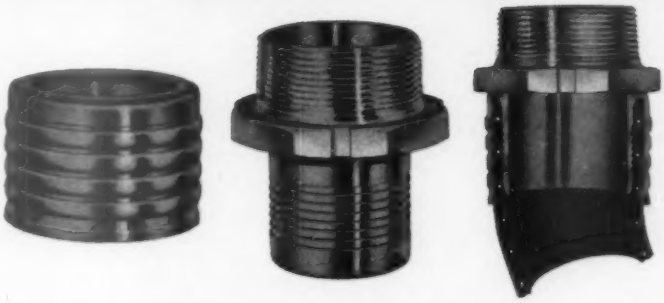
Scores of meetings, panel discussions and workshop sessions are being planned by the convention committee.

The show is not open to the general public. The Association will make hotel reservations for those who register in advance through their local associations or if they write to NAHB Convention and Exposition Headquarters, 140 S. Dearborn St., Chicago 3. An advance registration fee ($10 for ladies, $15 for men) must accompany each application.

Gas-fired central Heating is broken down by States

APPROXIMATELY 10,798,100 homes in the United States are centrally heated by gas according to estimates made by

INTERNATIONAL



Economical 2-piece permanent fuel oil and gasoline hose coupling—available in seven sizes!

INTERNATIONAL RIB-LOX®

New brass permanent coupling is ideal for fuel-oil and gasoline tank-truck and airport service. Incorporates new exclusive International design features that mean easier installation, longer life, and trouble-free service. Ribbed ferrule minimizes internal stress, increases end-pull strength of coupling. Flared ferrule and tapered body shank prevent cutting or chafing of hose. Male and female are available in 1, 1¼, 1⅜, 1½, 2, 2½, and 3 in. sizes. Octagonal nuts are slotted for spanner wrench to make installation easy and quick. Rib-Lox can be attached with any fuel oil coupling expanders now in existence.

Forged brass reattachable coupling for fuel-oil and gasoline hose

INTERNATIONAL DUBL-GRIP®

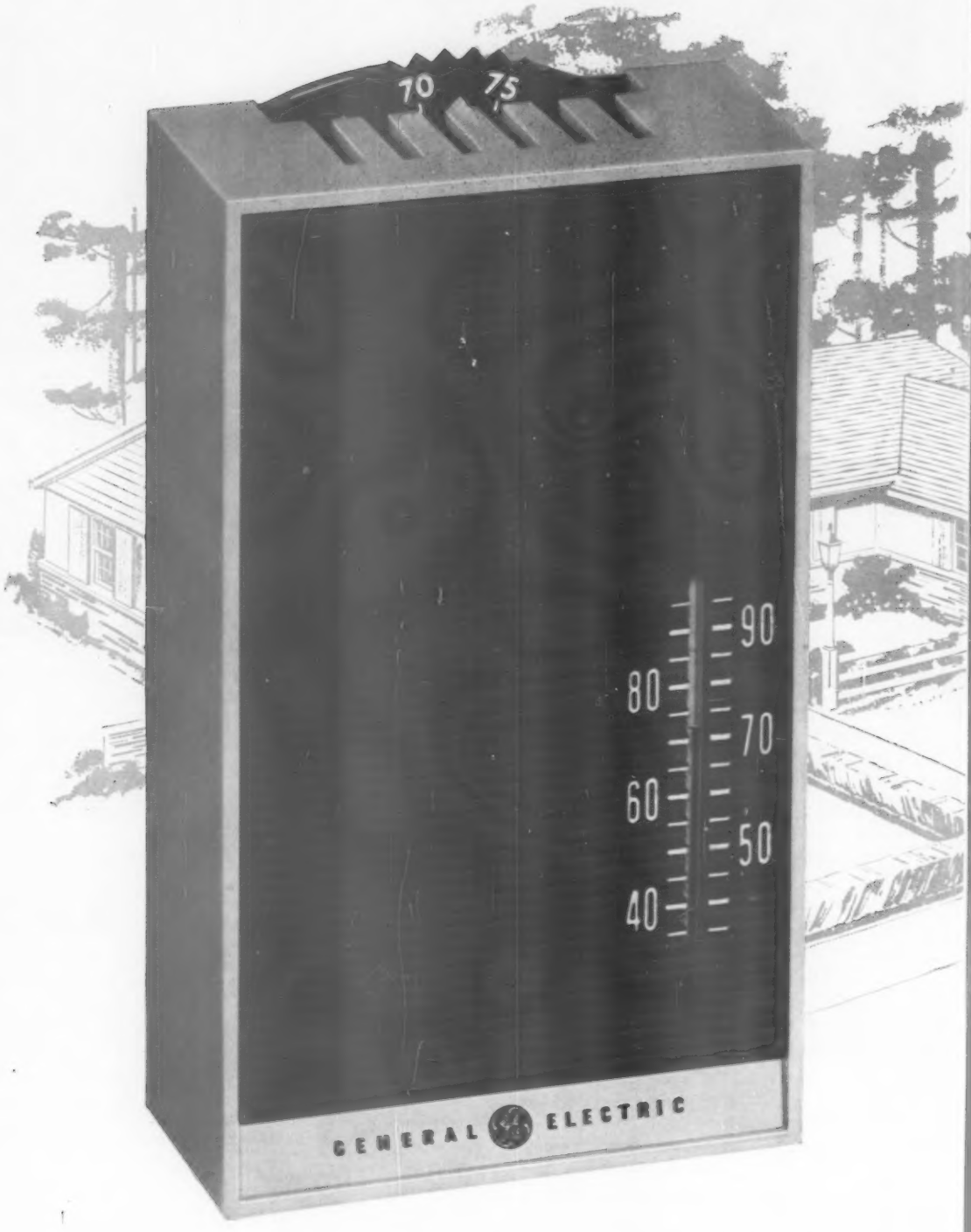
Reattachable 2-piece coupling requires only a wrench for assembly. Tapered stem and shell, wide flat body threads prevent cutting or chafing of hose. Provides rigid, leakproof connection. Available in male and female in 1, 1¼, 1⅜, and 1½ in. sizes. The industry's most widely used reattachable coupling.

International makes couplings for many applications, including Dubl-Guard® with internal spring guard construction to prevent kinking; Stream-Flo®, a permanent, one-piece, nonsparking coupling; and Super-Grip®, a reattachable coupling for high-pressure hose. For hose couplings of any type, write to International for data.

INTERNATIONAL COUPLINGS, INC. CLEVELAND 15, OHIO

Division of The Gabriel Company

designed to complement



the décor of every home . . .

GENERAL ELECTRIC'S NEWEST STRAIGHT-LINE THERMOSTAT

Here's a brand-new straight-line thermostat from General Electric. Its clean good looks and modern appearance match its proved, engineered accuracy. And what does this mean to you and your customers?

It means solid comfort conditioning. This new, precision-engineered instrument provides accurate control for today's heating systems . . . at the touch of a fingertip. Just a touch on the smart adjusting dial sets the temperature that means desired heating comfort.

It means sure, positive control. Because of its positive, snap-action mechanism, the new G-E thermostat provides maximum resistance to household vibrations; and it needs no leveling. And, of course, it's easy to install. Its sub-base goes on the wall with only two screws; and only two wire connections are needed.

For more information:
OEM's: contact your nearby G-E Apparatus Sales Office for application engineering service.
Dealers: contact your local distributor of G-E heating controls.
Or write to Section 740-142, General Electric, Schenectady 5, N. Y.

APPLIANCE CONTROL DEPARTMENT

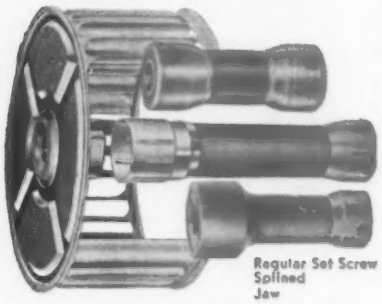
GENERAL ELECTRIC

QUALITY is our business .. without *any* compromise

***AND ONLY* Guardian**

GIVES YOU ALL THREE —

1. FLEXIBLE COUPLINGS



Regular Set Screw Splined Jaw

Only Guardian gives you these features—

- ROLL SPINNING—Exclusive process joins all three components at one time—while in final operating alignment.
- BRAIDED RUBBER—Ground to absolute true concentricity. Furnished in BUNA-N TUBE and NEOPRENE COVER. Lateral and angular alignment requirements fully met.
- ONE-PIECE DESIGN—Minimizes assembly and handling costs. Made to exact lengths required.

Over 5,000,000 Guardian couplings are on original equipment. This is your assurance of highest quality and universal acceptance in the field.

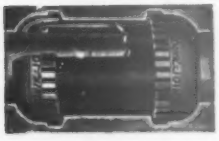
2. OIL TANK VALVES

No. 1910 B

Check These Superior Guardian Features—

- Metal-to-metal seating.
- Highest quality machined bar stock
- Greater wall and body strength.
- Fusible linkage available in all designs.
- Valve designs for every type of installation.

3. QUIK JOIT



Steel compression fittings for connecting steel pipe.

Patent No. 2,685,460

- Eliminates threading of pipe.
- Decreases cathodic corrosion and electrolysis.
- Guaranteed for pressure up to 2000 P.S.I.
- Allows 7° angular deflection.
- U.L. approved for oil and gas.

Write for free descriptive literature.

Guardian
PRODUCTS CORP.
COUPLING DIVISION

Dept. F-129 1215 East Second Street
MICHIGAN CITY, INDIANA

"GAS HEAT *and Comfort Cooling*" magazine. The accompanying table shows the units operating on January 1, 1959 broken down by states and by types of equipment.

Sales of gas heating equipment totalled 1,159,450. Making up this figure were 154,350 conversion burners (8% fewer than the year before); 877,040 furnace units (24% more than the previous year) and 128,060 boiler units, showing an 18% increase from a year earlier.

The total operating figure of 10,798,100 is 10% greater than last year's 9,797,800. Boiler units showed the greatest percentage increase with a 13% gain; furnace units in operation increased 12%; and conversion burners 5%.

Gas Units Operating January 1, 1959

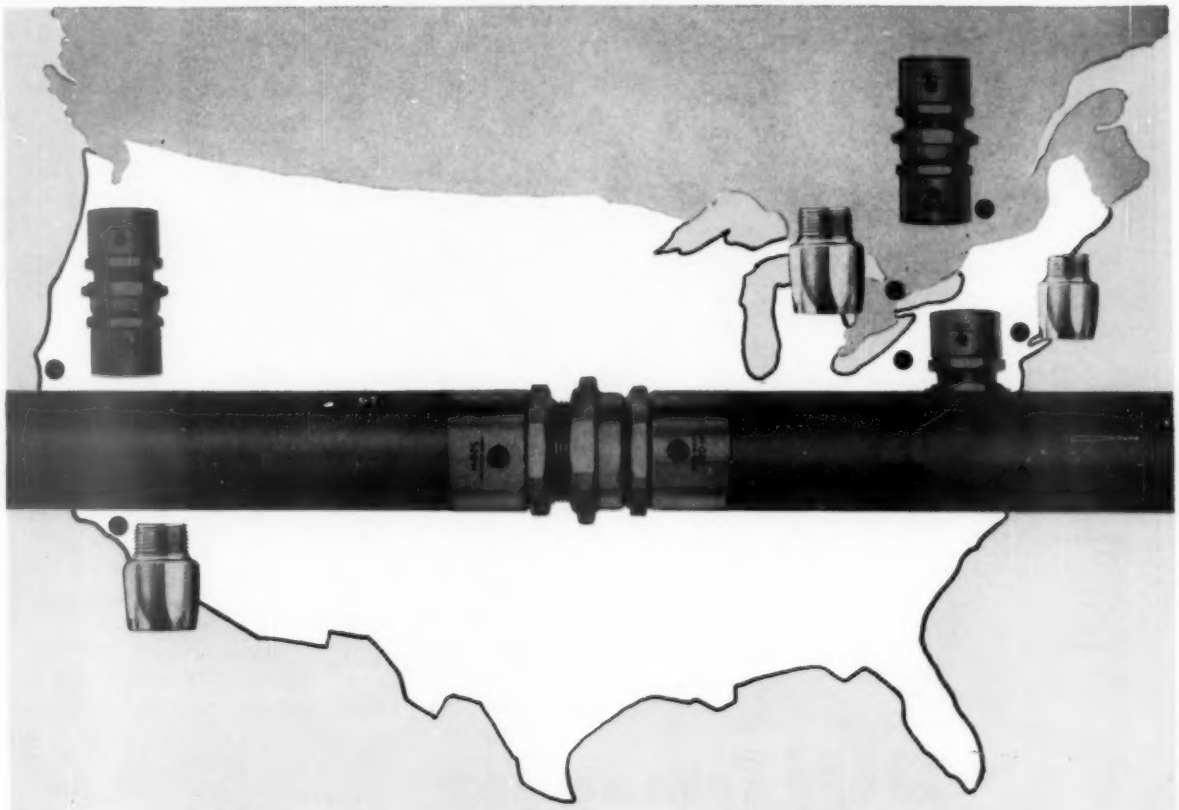
	Furnace Units	*Boiler Units*	*Conversion Burners*	*Total In Use*
Maine	2,635	385	1,020	4,040
New Hampshire	5,095	760	2,345	8,160
Vermont	1,625	115	225	1,965
Massachusetts	55,990	28,505	54,010	138,505
Rhode Island	6,700	2,420	7,245	16,365
Connecticut	18,090	10,685	15,310	44,085
NEW ENGLAND	90,095	42,870	80,155	213,120
New York	397,145	125,230	323,320	845,695
New Jersey	179,040	96,600	72,330	347,970
Pennsylvania	515,045	160,970	161,765	837,780
MIDDLE ATLANTIC	1,091,230	382,800	557,415	2,031,445
Delaware	11,415	2,070	1,060	14,545
Maryland	133,440	23,675	33,425	190,540
District of Columbia	67,045	17,375	10,815	95,235
Virginia	66,790	20,070	16,125	102,985
West Virginia	56,425	5,605	19,245	81,275
North Carolina	32,570	2,640	5,320	40,530
South Carolina	10,175	675	1,850	12,700
Georgia	111,060	7,860	25,745	144,665
Florida	48,180	1,590	5,415	55,185
SOUTH ATLANTIC	537,100	81,560	119,000	737,660
Ohio	754,765	71,760	334,505	1,161,030
Indiana	184,810	20,360	124,475	329,645
Illinois	447,895	82,040	361,915	891,850
Michigan	295,615	38,165	289,885	623,665
Wisconsin	159,480	15,085	67,900	242,465
E. NO. CENTRAL	1,842,565	227,410	1,178,680	3,248,655
Kentucky	113,455	8,735	35,275	157,465
Tennessee	75,475	6,780	22,095	104,350
Alabama	80,370	4,340	22,715	107,425
Mississippi	32,370	2,755	7,190	42,315
E. SO. CENTRAL	301,670	22,610	87,275	411,555
Minnesota	177,215	22,640	122,370	322,225
Iowa	180,260	12,010	92,315	284,585
Missouri	312,080	24,090	81,190	417,360
North Dakota	16,180	1,830	5,990	24,000
South Dakota	25,665	2,280	9,170	37,115
Nebraska	111,010	7,315	50,840	169,165
Kansas	133,000	13,085	40,635	186,720
W. NO. CENTRAL	955,410	83,250	402,510	1,441,170
Arkansas	40,925	3,045	9,565	53,535
Louisiana	100,985	5,590	13,245	119,820
Oklahoma	108,120	7,005	21,025	136,150
Texas	441,435	20,115	38,505	500,055
W. SO. CENTRAL	691,465	35,755	82,340	809,560
Montana	34,095	5,640	11,565	51,300
Idaho	8,745	300	3,510	12,555
Wyoming	17,730	1,855	6,235	25,820
Colorado	169,010	14,940	46,265	230,215
New Mexico	44,570	2,745	7,525	54,840
Arizona	106,475	3,350	8,695	118,520
Utah	87,300	4,170	26,615	118,085
Nevada	8,000	350	720	9,070
MOUNTAIN	475,925	33,350	111,130	620,405
Washington	32,240	3,450	6,450	42,140
Oregon	22,850	2,030	7,790	32,670
California	895,050	85,915	228,755	1,209,720
PACIFIC	950,140	91,395	242,995	1,284,530
UNITED STATES	6,935,600	1,001,000	2,861,500	10,798,100

IMMEDIATE SERVICE

ANYWHERE in U.S. & Canada. Scovill's nation-wide facilities provide the industry's fastest service on fuel oil and gas pump couplings!

Only Scovill with its country-wide network of sales offices and warehousing facilities is equipped to give you such fast . . . efficient service. All orders for fuel oil and gas pump couplings received by Scovill are shipped *promptly*. And the sizes you want are always *immediately* available. That's because Scovill makes and stocks a complete range —from ¾" to 3" in fuel oil couplings . . . and all standard sizes in gas pump couplings.

The largest—and finest—sales and service force in the industry is ready to consult with you anytime, anywhere when you specify Scovill couplings. And—because you can buy *direct* from Scovill—you save up to ⅓ the former cost of oil and gas pump couplings. Get complete details now. Write: Scovill Manufacturing Company, Hose Coupling Department, Waterbury 20, Connecticut.



Hose couplings by **SCOVILL**

Main office: 99 Mill Street, Waterbury, Connecticut Cleveland: 4635 W. 160th Street Los Angeles: 6464 E. Flotilla Street Houston: 2323 University Blvd.
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cleaner
fresher
purer air
Air dust-free as wind-scoured mountain slopes! Dust-magnet filters are electrostatic, trapping particles small as 1/10th of a micron. Permanent, non-clogging . . . when dirt-laden simply rinse clean and replace in unit. Available for furnaces and air conditioners. As you live and breathe . . . install Dust-magnets!
DUST-magnet
FILTERS
a product of Stoddard Industries
3383 E. Layton Ave., Cudahy, Wisconsin

Sohio acquires Assets of Leonard Refineries

LEONARD REFINERIES, INC., Alma, Mich., has been acquired by the Standard Oil Co. (Ohio). Leonard's assets will be exchanged for shares of Standard's stock according to an announcement by the presidents of the two companies, Reid Brazell, Leonard, and Charles E. Spahr, Standard (Ohio).

The Leonard operation will be conducted as a wholly-owned subsidiary of the parent company and no changes in personnel, brand name or channels of distribution are anticipated.

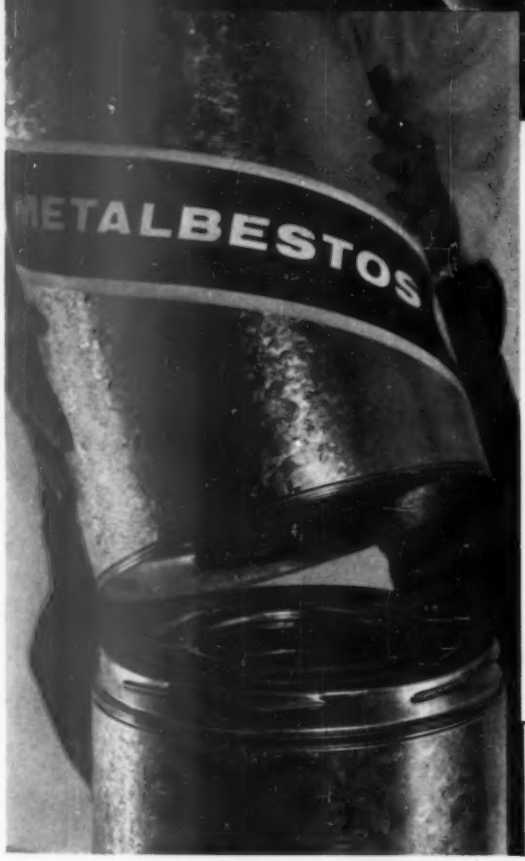
Boiler Men plan marketing Efforts

HYDRONICS and oilheating were tied together more than once during the semi-annual meeting of the Institute of Boiler and Radiator Manufacturers in Absecon, N. J., last month. R. S. Doherty, vice-president of A. W. Cash Valve Mfg. Corp., pointed out that boilers and fueloil were both strong in the same areas when he urged the group to give prominent display to its new products at the oil heat show in New York next spring.

The atmosphere of the sessions was cautiously optimistic; the steel strike seems to have affected the hot water and steam heating industry less severely than it has competing products, but several speakers emphasized the need for increased merchandising effort.

One whole session was devoted to the status of I-B-R ratings for finned tube radiation and the finned tube research program. Discussion centered around methods of ratings, and not on the validity of current ratings. The Institute is expected to announce any change in its membership's policies, if any, as soon as all member companies and licensees make their views known.

Other sessions heard speakers and panels covering the I-B-R research program at the University of Illinois, explanation of what constitutes use and abuse of I-B-R emblem and I-B-R ratings, gathering of industry statistics, industry prospects for 1960 and full reports from various task forces of the marketing committee.



to install the new all-fuel

METALBESTOS CHIMNEY

with "Twist-Lock Coupling!"

Write for Catalog-Brochure No. MC-3.

For oil, gas, coal, wood and for domestic incinerators.

MANUFACTURING PLANTS IN BELMONT, CALIF. • LOGAN, OHIO

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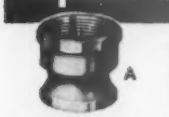
METALBESTOS DIVISION
WILLIAM WALLACE COMPANY • BELMONT, CALIF.

Here's proof

Superior quality forged body —precision machined
Uniform wall thickness —no weak spots
Extra heavy reinforcing rim
Larger diameter cam ears for longer service life
Extra Hi-Strength forged handles —greater economy
Stainless Steel pins —greater safety and longer service
Uniform heavy wall thickness —no weak spots
Recess retains gasket in coupler and assures proper placement
Superior quality forged body —precision machined —accurate tolerances

your best buy is EVER-TITE -the best quality quick couplings



Bronze
Aluminum
Stainless
Carbon
Malleable
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EVER-TITE Standard Adapter and Coupler

You save time and money when you use EVER-TITE COUPLINGS, because you get speedy deliveries—no leaks.

The tightness is predetermined in manufacture so you can be *sure* with EVER-TITE.

EVER-TITE Adapter and Coupler

The EVER-TITE trademark is a hallmark of dependability. EVER-TITES do the best job in the transfer of every type of product through hose or pipe.

Get EVER-TITE and get the *best*. Ask your distributor now.

EVER-TITE Shank Hose Coupling

EVER-TITE COUPLING CO. INC.
254 West 54th Street
New York 19, N. Y.

Every EVER-TITE saves time and money

Dust Plug

Dust Cap
EVER-TITE Dust Protectors

One highlight of the meeting was a skit based on the McClellan Committee hearings (with apologies to Senator McClellan and counsel) which emphasized the need for manufacturer cooperation to help increase attendance at I-B-R schools for dealer-contractors. The main point was that when dealers know about the schools, they turn out in large numbers.

M. C. Reed, president of Dunkirk Radiator Co., was chairman of the meeting. Just before it ended, H. C. Day, manager of heating and cooling product lines for American-Standard's Plumbing and Heating Div., received a standing ovation from the group after making an impassioned plea for the hydronics industry to put more effort into telling its story to the American public.

Arnold Madsen, Minneapolis oilheating dealer, demonstrating a burner he put together as a result of seeing a story about the new Shell combustion process in the August issue of FUELOIL & OIL HEAT.

The work in the laboratory had in fact employed rectangular, rather than globular combustion areas. An artist had sketched a globe for the write-up, as a possible new form. Madsen took it seriously and built one that works beautifully.

He used a conventional pressure burner in his experiment for the oil and air supply sources. The globe is actually double, with one inside the other separated about an inch. The space between is a secondary air source with numerous holes or ports to admit air to the hollow of the inner globe where the oil burns.

The actual flame is more of a blue haze, with capacity as low as .3 gph and flame temperature considerably lower than conventional models. It is smokeless and there was no soot or carbon deposit within the burner.

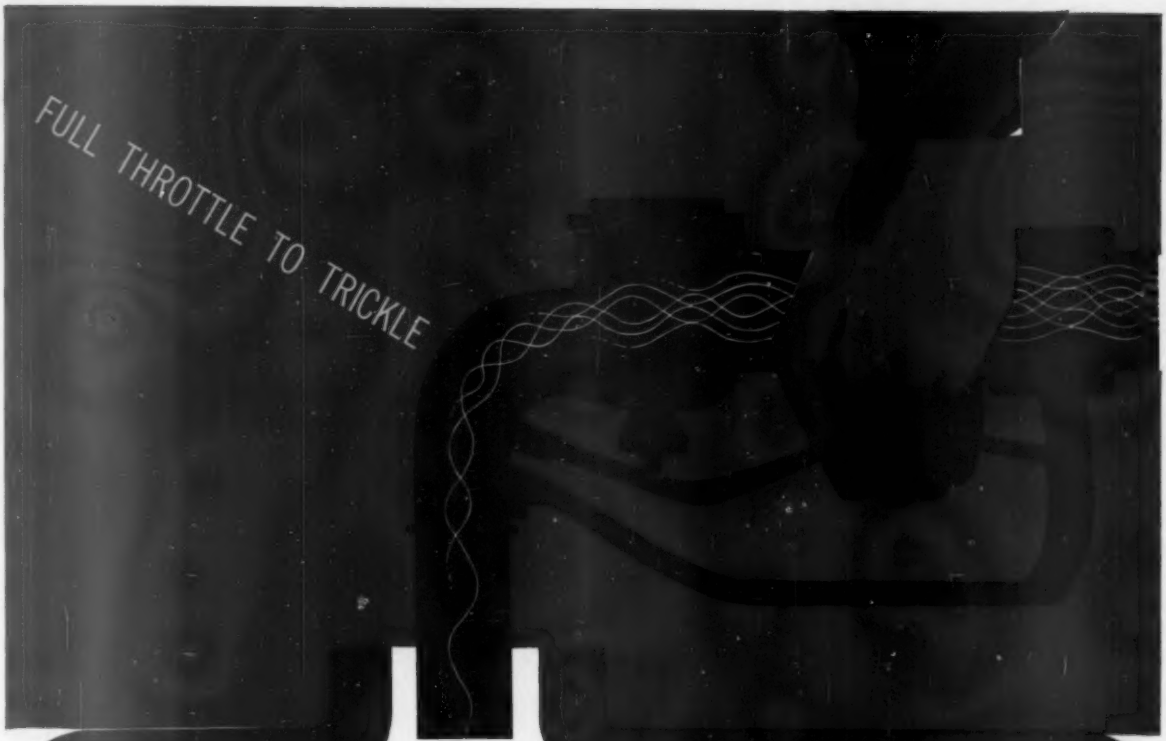
CLEANING POWER with the Portable NO. 521-8

take your SOOTMASTER in one hand hose and all

The Portable SOOTMASTER #521-8 weighing only 25 lbs. is the vacuum which offers the maximum filter area and largest soot chamber of any industrial cleaning unit of its size.

MASTERCRAFT'S exclusive hose-holder basket let's you carry the entire cleaner including the hose from job to job with only one hand. Users do more work with less effort.

JOBBER DISTRIBUTOR ENQUIRIES INVITED



LC M-7-N-X METER* GIVES YOU ALL THESE FEATURES

Top Accuracy: The M-7-N-X meter assembly has an air-actuated check valve to prevent air from affecting meter accuracy and an air eliminator to remove air from the system. Meets the requirements of the "Split Compartment" Test for all high-speed fuel oil delivery tank trucks.

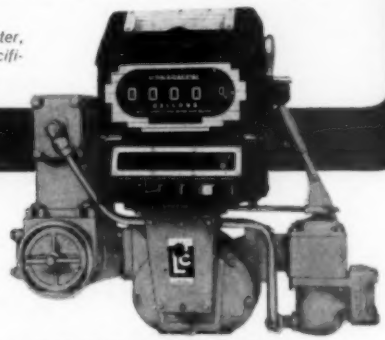
Fastest Possible Flow Rate: Discharge flow may be triggered from full throttle to trickle without adjusting the check valve or regulating truck engine speed. M-7-N-X is completely independent of pump pressure, pump efficiency, and discharge rate. Even the diameter of the fill pipe and size of vents do not affect meter's performance.

Economical Installation: M-7-N-X is an integral unit requiring no external piping or connections. Installation cost is low.

Rock-bottom Maintenance: Complete elimination of air by the M-7-N-X assures efficient pump performance at lower pressures. Equipment is not unnecessarily burdened—maintenance is minimized.

PERFORMANCE GUARANTEED! Order a new Liquid Controls M-7-N-X Meter Assembly today. Test it. Compare it with any other fuel oil meter. We guarantee its performance to be as stated.

*__The M-7-N-X Meter Assembly__ *consists of a 100 GPM meter, pre-set, printer, counter, pre-set valve, strainer, air eliminator, and air-actuated check-valve. Specification sheet available on request.*



LIQUID LC CONTROLS

LIQUID CONTROLS CORPORATION

Commonwealth Avenue, North Chicago, Illinois

LC Meters...engineered for precision measuring of petroleum and commercial liquids

SOLDER SEAL

BOILER PRODUCTS

FAVORITES FOR OVER 30 YEARS

Rust Raider Liquid Boiler Cleaner quickly removes and destroys rust and scale. No draining or flushing required. Rust Raider reaches all of the heating system. Insures instant heat at all radiators. Rust Raider preserves metal and prevents further rusting.

Quick and easy to use . . . add Liquid Boiler Solder Seal to the water in the heating system as directed on the can. Liquid Boiler Solder Seal quickly forms a rugged bond that restores heating systems to lasting, steady service. Contains no materials that will impede circulation . . . no acids to damage any part of system.

Boiler Lax powdered concentrate gives fast, long-lasting results . . . quickly knocks out rust, grease and scale in one operation . . . no draining or flushing. Stops foaming, priming and surging. For new installations . . . one treatment protects parts for an entire season

America's leading boiler repair compound. POWDER BOILER SOLDER SEAL, quickly and dependably, seals boiler leaks and forms a rugged bond. Resists the same heat and pressure that the boiler itself will withstand. A quick, sure repair for leaks in steam and hot water systems . . . even repairs leaking pipes and radiators.

AT YOUR P & H WHOLESALER

RADIATOR SPECIALTY COMPANY

CHARLOTTE, NORTH CAROLINA

OUR CATALOGUE LISTS OVER 600 RUBBER AND CHEMICAL PRODUCTS

Ask for your copy today!

OHI of Long Island appoints Lukkason executive Secretary

LESTER N. LUKKASON has been appointed executive secretary of the Oil Heat Institute of Long Island replacing Robert M. Barr who has joined Jet Heat, Inc., Englewood, N. J.

Ray Nathan, president of the group, made the announcement. Lukkason was assistant director of public relations for the National Lead Co.

The Oil Heat Institute of Long Island represents nearly 80% of all the heating oil delivered to homes in Nasau and Suffolk Counties. The groups offices are at 65 Greenwich Street, Hempstead, N. Y.

Winners in Limerick Contest announced by OHI of Oregon

THOUSANDS of entries in the 13-week Oil Heat-O-Rama limerick contest were judged and at the end of October the ten grand prize and 44 lesser prize winners were announced by the Oil Heat Institute of Oregon and Southwestern Washington.

Promotion of the contest was primarily by television with time used on stations located in Portland, Medford, Klamath Falls and Eugene, Ore. In evaluating the contest, Leonard Gassner, executive secretary, said that more oil furnaces were sold during the summer than any time since the advent of natural gas to the Pacific Northwest.

The winners were announced at an awards banquet at the New Heathman Hotel in Portland. The promotion was devised by the Pacific National Advertising Agency.

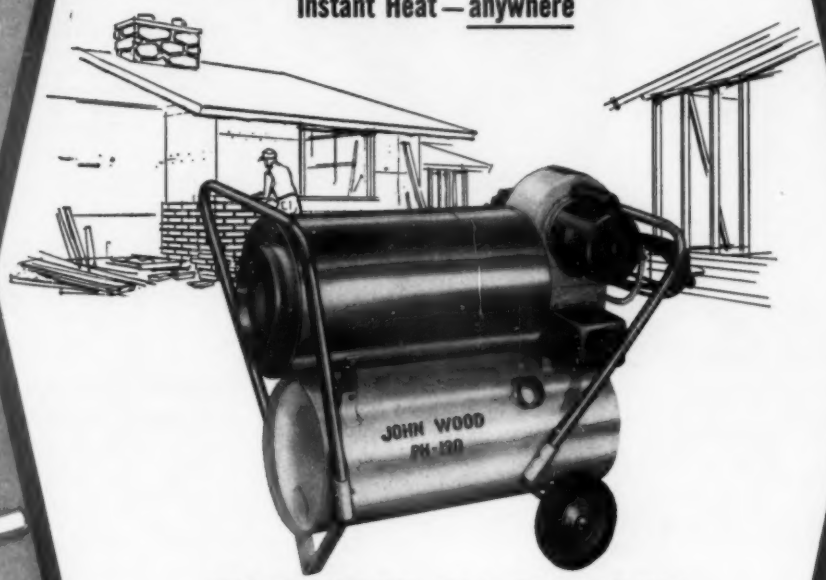
Cash awards were made to salesmen

YOU SELL MORE BECAUSE...
YOU HAVE MORE TO SELL

WITH THE JOHN WOOD FULL LINE

WORK ON COLDEST DAYS!

Instant Heat—anywhere



JOHN WOOD ALL-PURPOSE PORTABLE HEATER

Just flip a switch for forced super hot air in buildings under construction, for plumbing and heating roughing-in or repair jobs, warehouses and all emergency or temporary heating jobs. Exclusive design eliminates smoke, visible flames and odor. Burns kerosene, #1 or #2 diesel or fuel oil.

JOHN WOOD COMPANY

Heater and Tank Division

Conshohocken, Pennsylvania • Chicago, Illinois

QUALITY PRODUCTS JOHN WOOD SINCE 1857

DELAVAN

type "W" nozzle takes the guess-work out of nozzle selection

Delavan's Type "W" is truly the industry's only *all purpose* nozzle. No need to worry about hollow or solid cone in the small burners (.50 through 1.35 GPH). You can replace either pattern with improved fires on most jobs.

Remember, Type "W" is a premium nozzle designed especially for small burners where nozzle performance is most critical.

Try an assortment of "W's" today. You'll find them to be a time-saver on your regular service work and ideal for trouble-shooting or for those fussy jobs.

From the world's largest nozzle manufacturer Delavan is the largest manufacturer devoted exclusively to the design and production of nozzles. Another reason why Delavan nozzles are your best assurance of quality and performance.

Ask your jobber, or write for free literature.

DELAVAN Manufacturing Company

WORLD'S LARGEST MANUFACTURER OF NOZZLES • WEST DES MOINES • IOWA

Canadian Representative
Ontor, Ltd.
12 Leswyn Road
P.O. Box 608, Station T
Toronto 10, Ontario, Canada

Mrs. Dean Anderson, first prize winner in the Oil Heat-O-Rama contest, is flanked by Leonard Gassner, executive secretary on the left, and James S. Coon, OHI treasurer.

Top prize was a $2,500 fully equipped 14-foot boat. The second prize was a Renault car.

selling the most oilheating during the contest period. Dave Lebenzon, Montage Furnace Co., won the $100 first prize; H. R. Grander, H. J. Sandberg Co., $50; and Vern Stoelting, Albina Fuel Co., $25.

Humidification Association appoints Boeddener to Staff

GEORGE BOEDDENER, retiring managing director, National Warm Air Heating and Air Conditioning Association, has been named executive vice president of the National Humidification Association, Cleveland. The appointment becomes effective January 1, 1960.

At the Association's recent meeting in Detroit the following officers were elected for the coming year: Joseph Perlman, Auto-Flo Corp., president; James Madden, Maid-O-Mist, Corp., vice-president; Morris Margolis, secretary; Jack Green, Viking Air Products, treasurer.

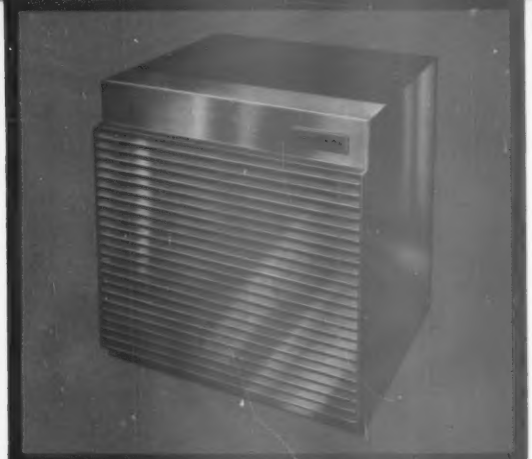
Perlman, Madden and Green plus Robert Redner, General Filters, Inc.; and Kent Fournier, Skuttle Manufac-

the quality
tells . . .
the quality
sells . . .
JANITROL
AIR-COOLED
AIR-CONDITIONING
Hallmark of Quality
in Luxury Comfort

UNCHALLENGED COOLING PERFORMANCE...

in all-new JANITROL

52 SERIES CONDENSING UNITS



A COMPLETE LINE TO MEET ALL NEEDS . . .
CAPACITIES FROM 22,200 TO 110,200 BTU HR.

Outwardly beautiful and pleasing to the eye, inwardly rugged and powerful, new Janitrol 52 Series provides low-cost central cooling with matchless reliability and efficiency. Here are some of the many ways new Janitrol 52 Series condensing units are demonstrating their excellence . . .

In Performance . . . condensing coils have greater area to dissipate more heat and to provide higher efficiency. Operation with outside temperatures as high as 125°F.

In Styling . . . modern, simple and functional cabinet that will be in the best of taste in any landscape plan. Finished in beautiful, durable, weather-resistant, automotive-type enamel.

In Economy . . . powerful, top-mounted fan draws in quantities of cooler ground air over the condensing coil, which is shaded from the sun's heat by louvers.

In Quietness . . . compressor and fan are unusually quiet in operation. Cabinet is acoustically treated with a weatherproof, sound-absorbent material.

In Safety . . . upflow exhaust protects nearby plants from hot blasts . . . enclosing grilles safeguard pets and children.

In Service . . . all components are easily accessible. Service panels may be removed without affecting operation, to make checks while unit is in full operation.

A.R.I. CERTIFIED

Full A.R.I. certification is your assurance this equipment meets or exceeds standards of the Air Conditioning and Refrigeration Institute. A five-year written warranty backs up your choice.

JANITROL AIR-COOLED SUMMER AND YEAR 'ROUND COMFORT SYSTEMS TO MEET ALL NEEDS

Janitrol Win-Sum-Matic Year 'Round Systems

A complete central heating and cooling unit in a compact, smartly-styled cabinet smaller than most home refrigerators! Features air-cooled summer cooling, thrifty gas heat with Dura-Tube heating heart, guaranteed for 20 years! Exclusive "Season Selector" control allows changing from heat to cool (or vice versa) in seconds. No special tools or service call needed.

Janitrol Add-On Cooling System

With Janitrol Add-On Cooling, most any forced air furnace can be easily adapted to circulate cool, filtered air to every room in the home. The Janitrol evaporator coil is installed in furnace outlet duct and connected to the properly-sized 52 Series condensing unit. The existing furnace blower and duct system circulates the cooled, dehumidified air. Here's full central air conditioning at low, low cost!

New Janitrol J-Line Self-Contained Air Conditioners

The Janitrol J-Line models are an economical answer to cooling needs. In one compact unit are the blower, compressor and evaporator coils. Operation is remarkably quiet. May be used with ducts or as free discharge. Installs through walls in crawl space, in attic or other limited access locations.

Janitrol Schoolroom Cooling and Heating

Janitrol offers a self-contained room heating and ventilating system (with optional cooling) that features perimeter-type, draftless air distribution. Installation economies are noteworthy (savings up to 60% over large central systems). For new schools, additions and modernization.

WRITE TODAY!

for complete information on Janitrol heating and cooling systems for your business needs. Remember—architects and engineers can specify . . . and dealers can recommend and install *Janitrol* equipment with complete confidence it will provide the finest, most carefree performance possible.

JANITROL
HEATING AND AIR CONDITIONING
A Division of Midland-Ross Corporation

turing Co. were named to the Board of Directors.

The membership voted to change its name from The Humidifier Association to National Humidification Association and to incorporate the organization as a non-profit group.

New Silver Shield Program is started in Pennsylvania

ANOTHER Silver Shield Program was started November 4 when heating men met for a dinner meeting in Sharon, Pa. The National Warm Air Heating and Air Conditioning Association, Cleveland, sponsors the programs which are designed to upgrade heating installations.

President of the new Mercer County Silver Shield Association is Bernard Lawrence. Graduates of a 12-week training program were presented certificates during the evening. James W. Martin, Pittsburgh, taught the course.

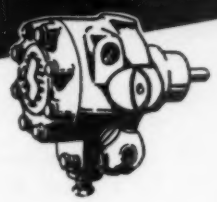
OHI servicemen Exams held in Florida and Connecticut

TWO STATES, Florida and Connecticut, inaugurated the Oil-Heat Institute program to test and certify servicemen during November.

The examinations were held under the local sponsorship of the Better Home Heat Council of Florida and the Oil Heat Institute of New England.

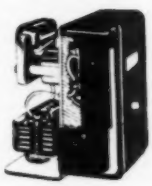
Companies with more than 50% of

Sid Harvey's Replacement Parts REBUILDING SERVICE Gives You—

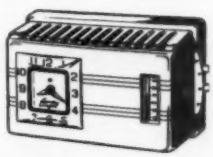


VARIETY
Sid Harvey's rebuilds all makes, all models of Pumps, Valves, Transformers, Controls, Circulators, Low Water Cut-offs, etc. If it can be rebuilt, Sid Harvey's rebuilds it.

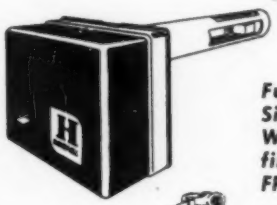
SPEED
When TIME means MONEY or the loss of a good customer, you'll appreciate Sid Harvey's FAST SERVICE. IMMEDIATE EXCHANGES on most models are available from Sid Harvey's huge stock of rebuilt parts. Mail orders go out the day they are received.



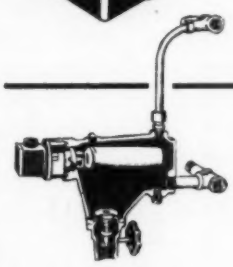
GOOD LOOKS
The fine finish on every Sid Harvey rebuilt unit makes it LOOK LIKE NEW, and they are individually packed in cartons to protect them from possible damage. Your customer will like their appearance.



LOW COST
Sid Harvey's rebuilt parts look like new, act like new, and are guaranteed like new, but cost about HALF as much. You get more, and make more profit when you use Sid Harvey's rebuilt parts.



Fully described in Sid Harvey's new catalog. Write for it on your firm's letterhead. It's FREE to the trade.



SID HARVEY INC.
VALLEY STREAM, NEW YORK

USED BY PEOPLE WHO VALUE THEIR REPUTATION

Fastest, Easiest Way to Figure Fuel Oil Charges!

DELBRIDGE
Oil & Gas Calculator

Stop figuring fuel oil charges the old-fashioned, long-hand way! No more errors—no more dissatisfied customers!

Figure fuel oil charges fast—easily—accurately—with the DELBRIDGE Oil & Gas Calculator! Total amount of sale is *pre-calculated* for you without laborious long-hand figuring and errors—simple as finding a phone number!

Covers prices from 5¢ to 35¢ per gallon by steps of 1/10¢. Shows gallonage from 1 to 250 gallons by steps of 1 gallon—then to 5,000 gallons in easy steps.

Durable, long-lasting leatherette metal-ring binder. Only 5¼" x 6½"—fits easily in coat pocket. Guaranteed accurate by Lloyd's of London. Only $5.00 each.

Try the DELBRIDGE Oil & Gas Calculator for 10 days . . . *without obligation!* Prove to yourself how it can save time . . . cut down costly errors. Mail coupon for FREE 10-day trial. *Send no money!*

FREE TRIAL COUPON!

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2502 Sutton Ave., St. Louis 17, Missouri

Send the DELBRIDGE Oil & Gas Calculator . . . *without obligation!* We will approve your invoice for $5.00 (plus postage) within 10 days if we decide to keep the Calculator.

Name.....Title.....

Company.....

Address.....

City.....Zone...State.....

their servicemen certified under the standards set up by the Distribution Division of OHI are permitted to display a special seal on their trucks and office windows. The servicemen taking the test and receiving a grade of 80% or better receive certification in the form of wallet cards and pins.

The first printing of 1,000 examination forms will be exhausted this month according to Robert Hundley, Steinen Mfg. Co., Chairman of OHI's education committee. It is anticipated that by the end of next year 6,000 servicemen will have been certified.

Philadelphia Fuel Conference discusses fleet Maintenance

SECOND of a series of work shops was held on November 24 by the Greater Philadelphia Fuel Conference. Fleet maintenance was the topic discussed by a panel of fuel men.

Serving on the panel were J. J. Gillin, Jr., Petroleum Heat and Power Co.; A. J. Kelley, M. Kelley's Sons, Inc.; Charles Newsome, J. E. Kunkel; M. F. Prior, F. C. Haab Co., Inc., and Shep Waldman, H. Waldman Coal & Fuel.

Among the subjects they discussed were: Carburetion and engine tune-up, essentials of longer bearing life, care and maintenance of the clutch, adjustment of rear axle assemblies, essentials of practical brake maintenance, care of the cooling system, getting top mileage from tires, front end assemblies and wheel alignment.

OHI of Long Island holds November general Meeting

THE FILM, "Big Little Businessman," was shown at the general meeting of the Oil Heat Institute of Long Island on November 18 in Hicksville, N. Y. This is the film produced by the National Fueloil Council and the National Association of Manufacturers for nationwide exposure on NAM's television series, "Industry on Parade."

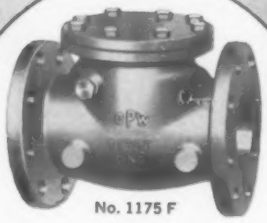
The results of the October 14 rally was reported to the group. In addition, the newest developments on the national picture for oilheating were discussed.

No. 175

OPW
SWING CHECK VALVES
hold prime

No. 1175

No ordinary group of valves, these OPW Check Valves have been specifically designed, ground and lapped for gasoline service. They are 100% tested to effectively and reliably do a particular job . . . hold prime.
These are but a few of OPW's prime holders. Write for new Bulletin F-24 for full description of these and other types.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OPW CORPORATION
2723 COLERAIN AVE., CINCINNATI 25, OHIO
VALVES • FITTINGS • ASSEMBLIES
for handling hazardous liquids.
KIrby 1-5400

FOR TANK TRUCKS AND TRANSPORTS

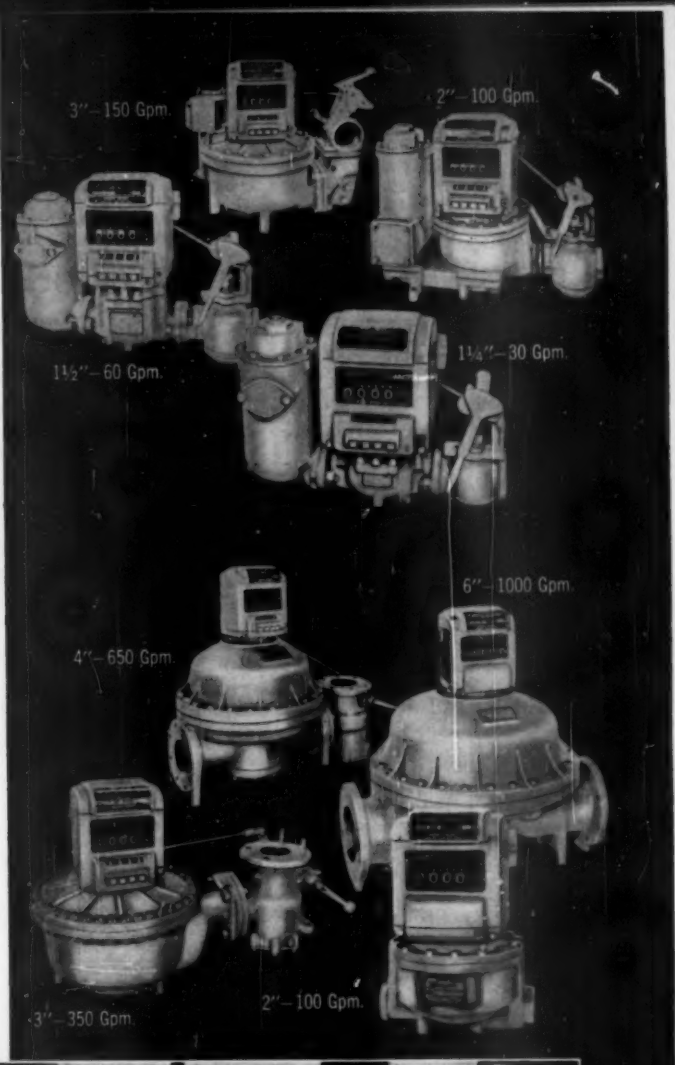
. . . the standard of performance and accuracy coast-to-coast. Complete "Compact" metering systems adaptable to any truck compartment. Capacities to 150 gpm. Print-O-Meter and Auto-Stop features available.

for a better measure of profit...

there's an efficient NEPTUNE METER for every job

FOR BULK PLANTS and TERMINALS

. . . all sizes to 1000 gpm . . . all with the same dependable accuracy you now enjoy with Red Seal Tank Truck meters. Print-O-Meter and Auto-Stop features available.

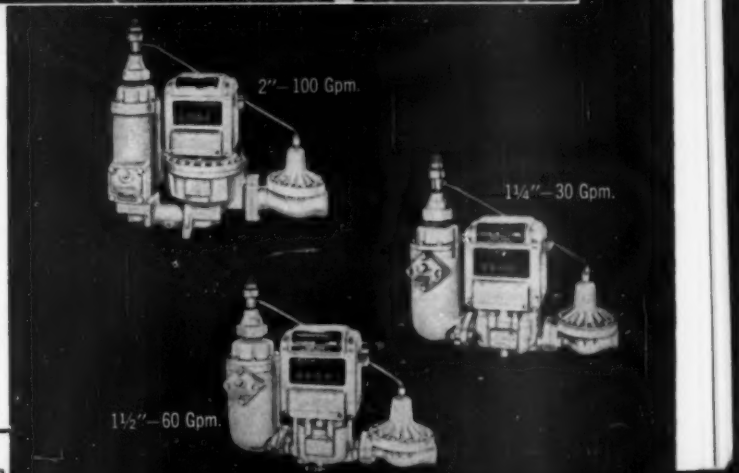


REMOTE CONTROL METERING

. . . not just remote reading . . . but full remote control centered in the office. Automatic interlock prevents withdrawal of product until ticket is "printed in" by office register.

FOR LP-GAS METERING

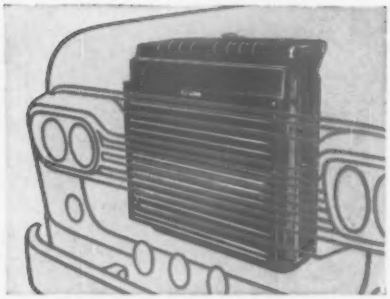
. . . three sizes . . . each a **complete** LP-Gas metering system including all accessories. Design of vapor eliminator and differential valve reduces load on pump and needs no seasonal adjustments. Print-O-Meter available.



NEPTUNE METER COMPANY

19 West 50th Street • New York 20, N. Y.

NOW! Certified Durability



CLOSER TEMPERATURE CONTROL obtained with automatic radiator shutters means longer engine life, more efficient operation. Temperature variation between 167° and 187° with shutters as compared to 102° to 181° without shutters was reported and certified in loaded vehicle road tests.

LONGER WIRING HARNESS LIFE is the direct result of Ford's greatly improved electrical wiring system for 1960. Ford's '60 wiring harness and the 1959 wiring harness were subjected to shaker table tests plus constant exposure to oil and water vapors, and temperatures of 200°. Certified test results show a threefold increase in 1960 wiring harness life.

INCREASED FUEL PUMP RELIABILITY is an added benefit from Ford's submerged-type electric fuel pump. Certified results of dynamometer tests showed no vapor lock with Ford's electric pumps at temperatures up to 200°, whereas incipient vapor lock with mechanical fuel pump resulted in a power loss of 9% under same conditions.

It's a fact! Numerous reports from high-mileage operators of Super Duty Trucks attest to Ford's outstanding durability. Studies by an independent research firm provide certified proof that these models are even more durable for 1960.

Ford Super Duty Trucks have earned a reputation for exceptional performance and durability since their introduction two years ago. Shop service records of many leading fleets show Super Duty tractors with mileage readings between 150,000 and 250,000 and no repairs other than normal maintenance. Similar testimony to the dependability of these Big V's by other satisfied users is being added each month. Is it any wonder that '59 sales of these units were more than double those of 1958?

And for 1960, the Ford Super Duties offer additional refinements. Bigger optional axles and increased GVW's to permit greater payloads and more profitable operation. Automatic radiator shutters to keep the engine temperatures within the most efficient operating range, improved submerged-type electric fuel pumps to prevent vapor lock, and redesigned wiring for more reliable operation are typical of the improvements to be found in these units.

The changes offered for 1960 were tested and evaluated by a leading research organization. Certified results of the studies by this impartial firm (name available on request) provide proof that Ford's Super Duty Trucks are even more dependable.

- **Certified Durability through closer temperature control!** Independent research engineers certify that Ford's thermostatically controlled radiator shutters kept water temperature between 167° and 187° in severe mountain grade operation. The test truck with shutters blocked open under same operating conditions had a temperature range from 102° to 181°. The temperature variation of only 20° with shutters means less expansion and contraction in block and heads. Higher, more constant temperatures permit oil to circulate more freely, reducing internal friction. All these factors contribute to longer engine life.

- **Certified Reliability with longer-lived electrical system!** Thicker insulation on wires resists deterioration by heat, oil and gasoline. Asphalt-impregnated loom and plastic-coated mounting clips protect against abrasion. Certified results prove that the 1960 wiring harness has three times longer life.

- **Certified Reliability with Ford's submerged-type electric fuel pump!** Dynamometer tests of engines with submerged-type electric fuel pump and conventional mechanical type showed that vapor lock was non-existent with Ford's electric pumps at temperatures up to 200°, whereas incipient vapor lock with mechanical pump resulted in a power loss of 9% at an underhood temperature of 200°.

Endurance tests were run on alternators, two-speed axle speedometer adapters and other related components with similar results. Get all the facts at your Ford Dealer's now!

in Ford Super Duties!

"Our first Ford C-1000 tractor has logged 190,000 trouble-free miles since March of '58,"

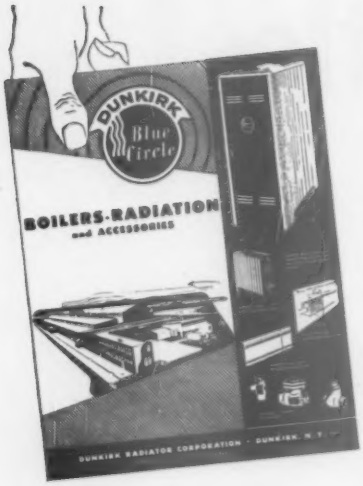
says Robey W. Estes, Vice President and General Manager of Estes Express Lines, Richmond, Va. "We haven't had a single road failure and we only bring it into the shop for regular preventive maintenance work once a month.

"We use the 477 engine and find oil consumption is exceedingly low . . . only one or two quarts added between 3000-mile oil changes. Engine compression at 190,000 miles is still high and fairly equal and our drivers say that power and pep are at about the same level as when the truck had been run only 60,000 miles.

"We are grossing between 52 and 56,800 pounds with our Ford Tilts. They are giving about the same gas economy and better oil mileage than other makes in our fleet. We bought our fourth Ford C-1000 tractor last month and hope to add more soon."

FORD TRUCKS COST LESS

LESS TO OWN . . . LESS TO RUN . . . BUILT TO LAST LONGER, TOO!



Send for this NEW BOOK and get your DUNKIRK Profit Story

● **Complete lines of cast iron boilers cover the entire household and light commercial markets. A line that provides every advantage and economy of Hydronic heating in Ranch, Split-Level, and Multi-Story installations. Steam and hot water boilers with built-in tankless hot water heaters,—for new buildings and modernization. Complete lines of baseboard and slender radiators and accessories give you a one-source Profit Package with simplified ordering, quick delivery, lower inventory and investment.**

Write or send coupon

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Please send the Business-Building Facts on Dunkirk Boilers and Radiation—DE-1158-A

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CITY _____ STATE _____

Northern New York Institute to hear Fred Burroughs speak

A GENERAL MEETING for all fueloil distributors in the three counties of St. Lawrence, Jefferson and Lewis, is being planned by the Modern Oil Heat Institute of Northern New York for December 10.

Fred Burroughs, National Fueloil Council, will speak. Also on the program is Jim Higgins, WWNY-TV who will outline the plan to move the coming campaign from radio to television.

Bronx Oil Trades Association renamed Oil Heat Institute

THE BRONX Oil Trade Association, Inc., New York City, has officially changed its name to Oil Heat Institute of the Bronx, Inc.

Edward T. Schneider is president of the group and Frank J. Howard is secretary.

Similarly, the Fuel Oil Dealers Association of Vancouver, British Columbia recently became the Oil Heat Institute of British Columbia, Inc. Norm S. McLeod is president and Cyril G. Hayman is executive secretary.

Southeastern Wisconsin OHI hears Reports at Meeting

LAVERN SCHAETZEL reported on the national organization at the October meeting of the Oil-Heat Institute of Southeastern Wisconsin.

In addition, members heard a report on the "Showcase of Homes," TV program sponsored by the group and the progress being made with builders to install oil heat.

Schuster re-elected President of Indianapolis Association

THE OIL HEAT Institute of Indianapolis re-elected Francis J. Schuster as its president. Other officers are Charles P. Wright, vice-president; Frank S. Pittman, treasurer and Floyd W. Van Fossen, secretary.

Directors are Robert F. Johnson, C. Burl Sexson, Roy F. Thopy, Paul L. Baldwin, MacFehsenfield, John C. Holmes, Evert A. Johnson, Edgar S. Joseph and Randolph McClure.

NO LOST TIME WITH SPEED-KLEEN CAPS

FROZEN SOLIDLY THEY LIFT OUT QUICKLY!

DELIVER MORE OIL WITH LESS WORK

MAKE MORE PROFIT ON EVERY GALLON

FREEZE PROOF SELF EJECTING CAPS LIFT OFF EASILY—QUICKLY.

For easier, cleaner, faster fills—at any pumping speed—there isn't anything that will help your delivery man as much as a Speed-Kleen nozzle tube and fill pipe fittings. Make his job easier and also save on delivery costs—as much as $5.00 per customer per year—by simply replacing present fill pipe caps with Speed-Kleen fittings.

Don't continue losing profits, write or phone C.G. Eyster at

TIME SAVING FILLS, INC.
Phone York 6119
140 W. Market St., York, Pa.

For those who want the best

T-500 ROOM THERMOSTAT

A heating system is no better than the thermostat which controls it. So why not have the best . . . particularly when it costs no more!

Remember: No other thermostat offers all the features of the T-500.

For free descriptive literature, send a postcard to the address given below.

Signet Controls

SIGNET CONTROLS 3205 S. E. 13TH AVENUE PORTLAND 2 OREGON

1st

FOR FASTER FILLING

PHILLY
RAPID-TITE
Fuel Oil Delivery System

. . . you can reduce delivery costs as much as 20%. We'll prove it to you with your equipment at your office. Ask our field service man or send coupon below.

PHILLY'S first for modern fuel oil delivery

- One Nozzle Connector fits all fills.
- One-quarter turn hook-up.
- One Cap and Insert for all fills.
- One "O" ring Seal for Cap and Connector.

PHILLY *RAPID-TITE* DIVISION
PLASTIC AND APPLIANCE CO., INC.
5311 WESTMINSTER AVE. PHILA. 31, PA.

MAIL TODAY

I'd like proof.

Name _____

CO. _____

Street _____

City _____ State _____

Better Home Heat Council appoints new PR Director

NEW DIRECTOR of public relations for the Better Home Heat Council, Boston, is Joseph P. McEnaney. The Council represents independent fuel-oil dealers in eastern Massachusetts and Worcester County.

For the past 11 years, McEnaney has been public relations officer for the Massachusetts Department of Public Safety. He retires from his rank of Captain in the State Police after 21 years of service with the Troopers.

He is a member of the executive Board of the Massachusetts Congress of Parents and Teachers, the Governor's Citizenship Participation Committees on Highway Safety and Juvenile Delinquency, the Institute for Safer Living of the American Mutual Insurance Co., and the Massachusetts Industrial Editors Association.

Leonard Marshman is speaker at OHI of Rochester Meeting

NEW DEVELOPMENTS in oilburning equipment were discussed by Leonard Marshman, Mobil Oil Co. and chairman of API's research committee on new burners, at a recent meeting of the Oil Heat Institute of Rochester, N. Y.

Calendar

DECEMBER
8–10—Better Heating-Cooling Council, annual meeting. Sheraton-East Hotel, New York City.
20—Westchester OHI meeting, Waldorf-Astoria Hotel, New York City.

1960
JANUARY
14—South Carolina Oil Jobbers Association, annual meeting, Hotel Columbia, Columbia, S. C.
17–21—National Association of Home Builders, Convention - Exposition, Chicago, Ill.
20–21—Northwest Petroleum Association, annual convention, Nicollet Hotel, Minneapolis, Minn.

FEBRUARY
1– 4—American Society of Heating Refrigerating and Air-Conditioning Engineers, Southwest Heating & Airconditioning Exposition, Dallas, Tex.
5– 7—Home Improvement Products Show, Navy Pier, Chicago, Ill.

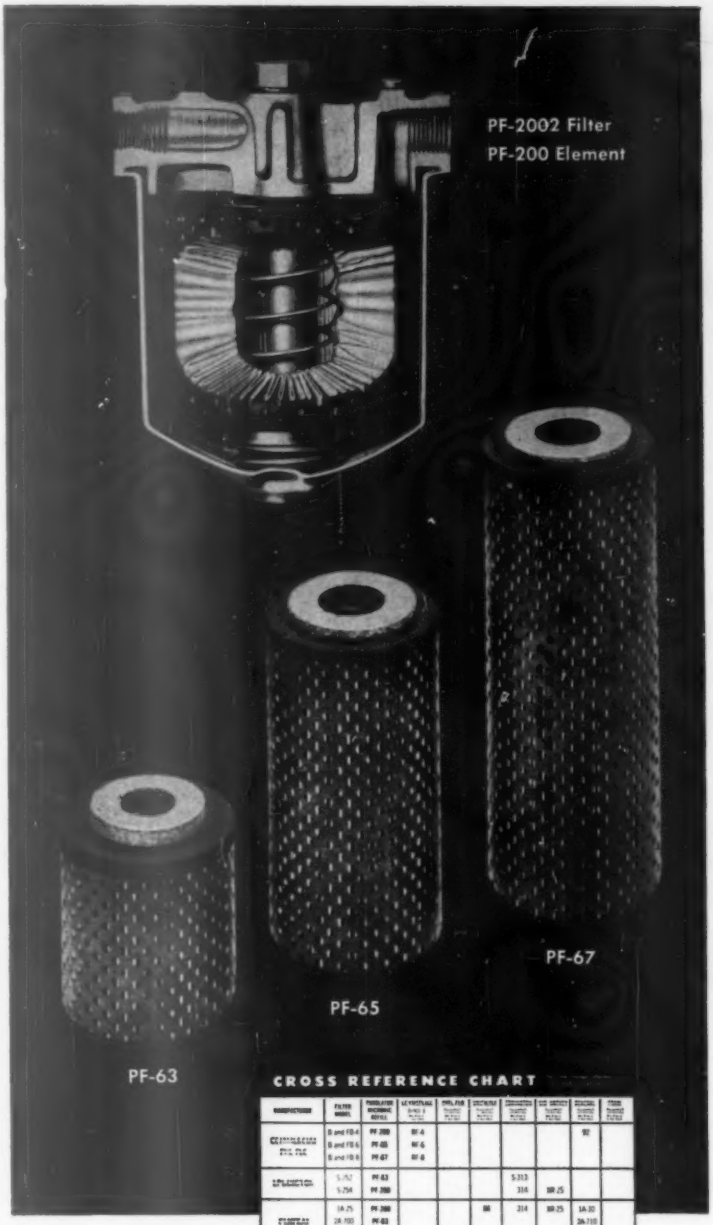
MARCH
7– 9—Jobber Management Workshop, Northwest Petroleum Association, Hotel Nicollet, Minneapolis.

APRIL
4– 7—Oil-Heat Institute of America, National Oil Heating and Airconditioning Exposition, New York Coliseum.
4– 7—Oil-Heat Institute of America, annual convention, Park Sheraton Hotel, New York, N. Y.

MAY
18–20—API Division of Marketing, mid-year meeting. Statler-Hilton Hotel, Cleveland, O.

"Gas...? Fantastically higher than Oil Heat!"
says Mr. Samuel Baker
President of Associated Independent Theatres, Inc.
"While the majority of the theatres in our chain are oil heated, several are now using gas. However, a recent cost analysis made by us clearly indicates that gas heat is fantastically higher than heating with oil. This higher cost differential has influenced us to replace all remaining gas heating units with Oil Heat before the start of the new heating season."
Time's short, but you can still beat the heating season, too, and save with low-cost Oil Heat. Just write—or even better, call Better Heat With Oil Council for information.
Little Bill
Better Heat with Oil Council
1220 Broadway, New York 1 • LO 3-5146

Typical of the series of advertisements prepared by the Better Heat with Oil Council, Inc., New York, N. Y., is this one which ran during October and November. The ad was used three times in each of the five New York City newspapers. The theme here highlights a commercial application of oilheating; other layouts make a similar presentation for residential oilheating. In addition, the Council sponsors radio programs 16 times a week and maintains billboards to extol oilheating.



Reduce your inventory problems...

THESE 4 PUROLATOR REFILLS SERVICE 98% OF ALL OIL BURNER FILTER INSTALLATIONS

With the addition of three new sizes, the famous PurOlator line of Micronic® filter refills (including gaskets) will now fit 98% of all oil burner installations.

In addition to supplying most requests from a minimum stock of four sizes, you can give your customers the five outstanding benefits of PurOlator Micronic filtration—*no matter what filter is installed on their job.*

1. Water and acid resistant element.
2. Uniform density filtering to .0005".
3. No channeling or "soft" spots.
4. Will not shrink, distort, stretch, flake or deteriorate.
5. A guaranteed filtering capacity of over 100 gallons per hour U.L. approved.

CROSS REFERENCE CHART

PUROLATOR REFILL FEATURES . . . 0005 DEGREE FILTRATION • ONE SIZE FOR ANY CAPACITY • U.L. APPROVED 100 G.P.H. • FIVE TIMES MORE FILTERING SURFACE AREA

This handy guide shows you, instantly, the filter refills which may be used, interchangeably, in all leading filter units.

PUROLATOR

PRODUCTS, INC.

"FIRST IN THE FIELD OF FILTERING"

Rahway, New Jersey and Toronto, Ontario, Canada

-MAIL COUPON FOR FREE CROSS-REFERENCE CHART-

Purolator Products Co., Inc.
Rahway, New Jersey

Please send me _____ copies of your Oil Burner Filter Element Cross-Reference Chart.

Name _____

Address _____

City _____ Zone _____ State _____

fueloil & oilheat

Luxaire®

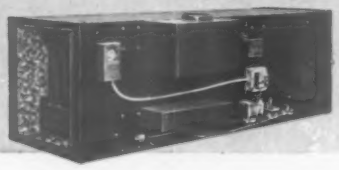
closes the gate on competition!

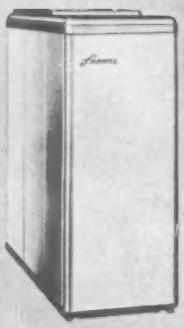
UPFLOW WINTER A.C. UNITS: Gas Fired and Oil Fired • Completely Assembled and Wired • Heavily Constructed • Smartly Styled • Approved for Close Clearances • Approved with High Static for Cooling.

COUNTERFLOW UNITS: Gas Fired and Oil Fired • Completely Assembled and Wired • The same Compact Design, Heavy Construction and Approvals as the Upflow Units.

BASEMENT TYPE WINTER A. C. UNITS: Gas or Oil Fired • Burn either Gas or Oil with Equal Efficiency • Compact, Completely Assembled and Wired Oil Units available.

GAS AND OIL HORIZONTAL FURNACES: Factory Assembled Complete Line • Low and Compact for the "tight" spaces • Readily adapted for Cooling • Rugged, Reliable Luxaire Construction.





When your customer is price-conscious and the bidding is competitive — that's when you can count on Luxaire!

For your customer is undoubtedly also value-conscious, and—from their attractively designed, rigidly built cabinets to their heavily constructed heating elements and top-brand controls — Luxaire Heating and Air Conditioning Units have the qualities that continue to please discriminating buyers, year in and year out!

Luxaire is able to provide more of the wanted features than can be obtained in higher priced units — at prices that permit you to compete against cheaply constructed units — because Luxaire is consistently ahead with both manufacturing volume and efficiency that reduces production costs.

If you are now reviewing your year 'end profit picture and want to become more competitive in 1960, see your Luxaire jobber now. His ready service makes a heavy inventory unnecessary!

GAS UNIT HEATERS: 5 Sizes

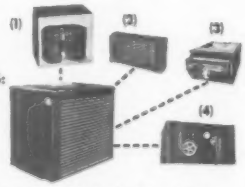
GAS CONVERSION BURNERS

GRAVITY FURNACES: Gas, Oil and Coal

COAL WINTER A. C. UNITS: 3 Sizes

YEAR 'ROUND A. C. UNITS: 2, 3, 5 H.P. • Air or Water Cooled

ADD-ON SUMMER A. C. UNITS:



2, 3 or 5 H.P. Air Cooled Condensing Unit, and (1) Plenum Cooling Coil, (2) Duct Cooling Coil, (3) Counterflow Coil, (4) Blower-Coil Unit.

THE C. A. OLSEN MANUFACTURING COMPANY • • ELYRIA, OHIO

Luxaire® HEATING & AIR CONDITIONING UNITS

fueloil & oilheat

'One-World' Organization OK'd

Text of Marshman Committee Report, unanimously accepted at Chicago API

by L. S. Marshman

SINCE the API Fuel Oil Committee meeting at Excelsior Springs in May, a Task Force of the Promotional Sub-Committee has been actively engaged in sharpening up and bringing into better focus a proposed fuel oil industry organization which would best consolidate all phases and activities of the industry under one roof in order that the oil heating market be preserved and expanded in the face of the aggressive activities on behalf of competing fuels.

The Task Force comprised—

C. M. Blickensderfer—Sinclair Refining Company

Robert Gray — FUELOIL & OIL HEAT Magazine

F. W. Heaney—Skaggs-Walsh, Inc.

W. F. Kenny, Jr.—Meenan Oil Company, Inc.

W. C. Scheitlin — Standard Oil Company (Indiana)

L. S. Marshman—Mobil Oil Company, Chairman

It was felt that this Task Force was a well rounded group inasmuch as several of its members are officially connected with other industry organizations. Fred Heaney is also President of Oil Heat Institute of America, Bob Gray is President of National Fueloil Council, and Bill Kenny is Chairman of the Fuel Oil Committee of National Oil Jobbers Council.

The Task Force started with the preliminary organizational proposal as outlined at Excelsior Springs. This proposal contemplated four major divisions in the organization, i.e., Manufacturers Division, Dealers Division, Refiners and Oil Suppliers Division, and Research and Technical Division.

After due deliberation they worked this structure around to a three division organization with the research and technical activity being transferred to the Refiners and Oil Suppliers Division.

The Task Force then priced-out this organization from the standpoint of the number of paid staff needed and the amount of money required to cover the headquarters expense.

At this point in its deliberations the Task Force felt it advisable to explore more thoroughly the concept of a functional type organization as against the class of trade structure it had been concentrating upon. A functional type organization is one designed or adapted primarily to perform some operations or functions. Objectives or functions which are important are established, and the membership of the organization is fitted around or into these basic functions to accomplish the desired result.

The Task Force started with an initial functional proposal and made several revisions and modifications in it before arriving at a functional type organization which would seem to meet the needs of the fuel oil and oil heating industry. It was then priced-out as to the number of paid staff required and a necessary budget for the operation of its headquarters.

It might be interesting to point out that the estimated costs of the class of trade and functional organizations were almost identical. There was a slightly lower estimated cost on the side of the functional, but it was not significant enough to make any appreciable difference.

The Task Force next compared the cost of these two types of organizations with the present costs of operating Oil Heat Institute of America, National Fueloil Council and the API Research Activity.

Consideration was given to the development of a dues pattern to see whether it could be expected that revenues would cover the central administrative expenses of a new organization.

Finally, the Task Force considered the advantages and disadvantages of the class of trade structure and the functional structure. The purpose of this assessment was to ascertain which of the two would appear to have the best chance of accomplishing effective results and receive the greatest over-all industry support.

As a result of these lengthy deliberations, the Task Force made its recommendation (a 5 to 1 vote) to the Sub-Committee and the Sub-Committee approved this recommendation by a unanimous vote of the members present at the meeting (9 in favor, none opposed).

Recommendation

The Promotional Sub-Committee hereby recommends to the Fuel Oil Committee of API that the Committee, and the industry, get on with the job of establishing a new industry organization representing all segments of the fuel oil and oil heating industry and that the functional organization structure, as detailed on the attached chart, be adopted. It is the considered opinion of the Sub-Committee that this type of organization will produce the necessary end results more

This report of L. S. Marshman to the Fueloil Committee of the American Petroleum Institute was approved in principle by that group by unanimous vote. It had previously been accepted by the API Research Subcommittee, by the National Fueloil Council and the Oil-Heat Institute. The next step is the forming of a joint committee to prepare a constitution, by-laws and other details for approval by the attorneys and the membership of each group. D. L. Barrett, chairman of NFC; J. L. Minner, chairman of API research group; and Fred Heaney, president of OHI, are to serve as joint chairmen of a small all-industry committee to prepare the documents. For all practical purposes, the "one-world" concept has been launched.

efficiently and effectively than the class of trade structure.

You will notice that this organization pattern calls for a Board of Directors of sixty, with equal numbers of dealers, manufacturers and refiners. The Chairmanship would alternate annually between a dealer, manufacturer and a refiner. There would be a twelve-man Executive Committee appointed by the Board from its membership. There would be a Finance Committee responsible for the disbursement of funds, whose membership and voting rights would be proportionate to the dollar support of the various segments. The President or Managing Director, whichever title is preferred, would be the operating head of the organization. The general administrative function would be the responsibility of the Secretary. The Treasurer would be a non-paid industry man.

The structure provides for concentration on the three most important functions or objectives now facing our industry. Marketing—up-grading and improving the efficiency and effectiveness of all who are engaged in the selling of heating oil and oil burning equipment, including the servicing of the equipment; Promotion and Communications—creating the proper image to the public on behalf of oil heating and doing it as effectively as it is being done by the gas and electric companies in promoting their fuels; Research and Technical—the cooperative action required to bring to the market a new, low-cost oil burner which will be generally competitive with gas equipment as to installed cost in the new home market.

These would represent divisions each with a full-time director and small staff. Each of these three divisions would have a thirty-man advisory council appointed by the Executive Committee and made up of all segments. In the case of the Marketing Division the council would be composed of 14 dealers, 8 refiners and 8 manufacturers; the Promotion-Communications Division group would have 14 refiners, 8 dealers and 8 manufacturers; the Research-Technical Division group would have 12 refiners, 12 manufacturers and 6 dealers.

Cost

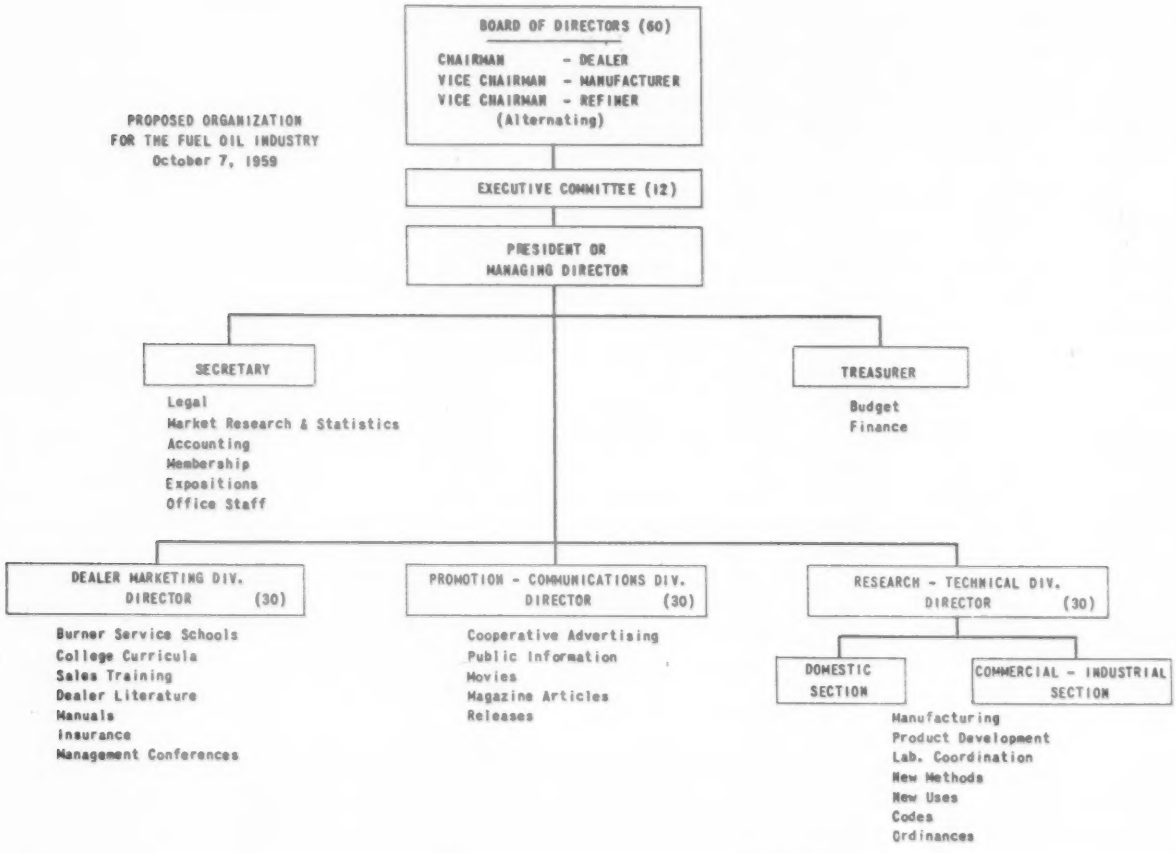
This organization would have a paid staff of twenty-three. We believe that the headquarters office cost would be as follows:

Staff	$250,000
Employee Benefit Plans	50,000
Travel Expenses	32,000
Rent	15,000
Light	1,200
Telephone & Telegraph	7,500
Supplies & Other	30,000
	$385,700
Less—Insurance Program Credit	25,000
	$360,700

These costs compare with the following of the present agencies:

		Paid Staff
Oil Heat Inst. (Net)	$105,000	(12)
Nat. Fueloil Council	120,000	(5½)
Research Activity	71,000	(2½)
	$296,000	20

In addition to these known costs there is a significant amount involved in indirect expenses at API and by in-



dividual company personnel much of which the paid staff would cover under the new organization. In other words, we feel sure that if all present costs could be isolated and included in this summary they would add up to something over $325,000.

The Sub-Committee prefers to look upon the cost of the new organization not as an expense, but rather as an investment to insure the future of the heating oil markets in the country.

Dues and Other Revenues

It is our opinion that a practical dues and other income pattern could be developed which would result in the following:

Dues

From Refiners	$210,000
From Dealers	60,000
From Manufacturers	35,000
	$305,000
Other Income	
Bi-Annual Exposition	30,000
Sales Promotion Pieces	25,000
	$360,000

Benefits of the New Industry Organization

1. The fuel oil and oilheating industry will present a strong, united front for the first time.
2. Basic objectives will be continually highlighted and concentrated upon by the collective talents of all segments of the industry.
3. We will have a truly homogenous approach to common problems.
4. We will receive wider support from many segments of the industry.
5. Manufacturers will be particularly attracted by the emphasis on research and promotion.
6. We will eliminate cross purposes and confusion and save time.
7. We will more successfully promote the acceptance of oil heating with the general public.
8. We will have an all-new modern look.

Next Step

If the Fuel Oil Committee takes affirmative action on this report and its recommendation, the Sub-Committee suggests that the next step would be for the Chairman to ask OHI, National Fueloil Council and the API Research Activity to each appoint an equal number of representatives which will be required to form an Organization Committee. This Organizational Committee will work out the points and details which need clarification or modification, name the organization and write its Constitution and By-Laws. After this the necessary final approvals should be secured and the organization launched as early as possible in 1960.

With this report the Promotional Sub-Committee concludes its assignment. It hopes that the recommendations contained in this report will be carefully considered and approved by the Fuel Oil Committee.

Sub-Committee
D. L. BARRETT
C. M. BLICKENSDERFER
W. C. BURNS
WILEY BUTLER
W. S. FENTON
ROBERT GRAY
F. C. HAAE
F. W. HEANEY
W. F. KENNY, JR.
C. E. KRAMB
P. T. LOMENZO
L. S. MARSHMAN, Chairman
W. C. SCHEITLIN
J. W. SCOTT

Jack Becker is the new Chairman API Fueloil Committee, Marketing Div.

A. JACK BECKER, president of Becker-Marsden Co., St. Louis, is the new chairman of the API Fueloil Committee, succeeding C. M. Blickensderfer, Sinclair Refining Co., who has held the post for the past two years. The new vice-chairman is D. L. Barrett, Esso Standard Oil Co., New York, and the new secretary William F. Briggs, Valley Oil Co., Middletown, Conn.

The Fueloil Committee meeting in Chicago was held November 8 at the Congress Hotel, the headquarters for the Marketing Division. In attendance were 28 committee members and about 50 guests. The primary action was the Marshman Committee report on unification of various industry associations and activities into a single unit. This is described more fully in the preceding article.

J. L. Minner, Research subcommittee chairman pointed out that the API had underwritten the first year's cost of $75,000 for the work at Battelle Memorial Institute, but that it will be necessary to seek another source for support beyond next March. He proposed that this might be handled through the National Fueloil Council until the proposed new "one-world" organization comes into being, which he anticipates by January 1, 1961. He then introduced David Locklin, the full time coordinator of the research project.

Locklin outlined the major objectives as:

1) Survey current research activities within the industry;

2) Study unconventional concepts and applications of oilburning;

3) Formulate a research program;

4) Stimulate and coordinate present research.

He pointed out that the oil industry and oilheating equipment manufacturers are now spending about a half million dollars a year on research for fueloil and oilheating. Some manufacturers of equipment have been very cooperative. An occasional one, particularly of the new concepts, is inclined to hold back on disclosures necessary for further development.

He listed as promising concepts of oilburning for further study:

1) Controlled recirculation of products of combustion;

2) Catalytic and/or surface combustion;

3) Precombustion zone vaporization;

4) Unusual atomization techniques;

5) Modified systems for combustion . . . plus various others.

He feels that our expansion problem lies not so much with wholly new

(*Please turn to page* 72)

Dial Hathaway for Weather

Company's customer Relations make it an intimate Part of New Bedford Life

by William M. Stein

"FOR HEAT call the Blue Fleet." This slogan, which the residents of New Bedford see in many places in their city, has come to represent the symbol of the Hathaway Oil Co., Inc.

Warmth, one of the elements of weather, is a very serious matter in this city that has lived from the sea since its very beginning. The lore of whaling permeates the historical atmosphere; but fishing, to this day, is one of New Bedford's most important industry.

Hathaway Oil Co., Inc., was founded in 1929 by John M. Hathaway and R. Eugene Ashley. Its business, at that time, was to service the local fishing fleet with fuel and lubrication. The transition to fueloil for home heating and heating equipment was quite natural as the demand for domestic oil heat developed. In 1940 the fueloil business grew to the point where it required the entire concentration of this firm.

Presently, Hathaway Oil Co., Inc., is operating under the direction of its president, John S. Ashley, the son of the original owner and, interestingly, the grandson of Charles S. Ashley, a man who, as mayor of the City of New Bedford, set a record by holding that position for 32 years. The family itself has some sort of record for being in the oil business. Prior to the general acceptance of petroleum, the Ashley family was identified in several ways with the whale oil industry.

An examination of the merchandising and servicing policy of this company reveals a form of customer relation program that makes Hathaway Oil Co. an intimate part of the life of the community. Anyone who lives near the sea and who earns his living thereby is always accompanied by his barometer. The weather plays an important part in his life. The men, in and around New Bedford, who go to sea to earn a living or for sport must have accurate weather reports. Their families, who usually await their return, also want to know the forecast. During the hurricane season all the residents of the community want to know what is coming.

To fulfill this need Hathaway Oil Co. initiated a "weather call-in service." It was started because it appeared to be a natural means of communicating with the entire community as well as supplying the necessary service. Moreover, the association between the weather and providing a source of warmth for homes appeared natural.

When this service was first started there were no major announcements made. However, it wasn't long before it became so well known in the community that the public and the telephone company started requesting additional lines for this service. The mounting number of busy signals created some confusion in the local exchanges of the telephone company.

To cope with this demand Hathaway Oil Co. installed five telephones that operate around-the-clock and can handle five calls a minute. Even with these facilities, the telephone company has tallied as many as a thousand busy signals a day during the hurricane season. At any time during the day if one would check these telephones he would find three or four in constant operation.

Many inquiries come in the very early hours of the morning by people who are about to leave on a fishing trip. Members of the firm related an amusing anecdote. Before the number was listed in the telephone directory, there were several instances when Hathaway employees were awakened at 4 A.M. by some fisherman who wanted to know the weather number.

John S. Ashley, president, (left) talks with Treasurer William Hendricks.

The mechanics of the program are quite simple. Hathaway Oil Co. receives the weather report via teletype three times a day on an automatic machine. This comes from a weather service in Boston that has an outstanding record for accuracy. Most important, the forecast emphasizes local conditions and provides a detailed marine forecast for local and off-shore waters.

In the event of some special emergency, such as an approaching storm or hurricane, reports are made more frequently. If an unexpected emergency should occur late at night, the weather service calls this change to the personal attention of Hathaway's night service foreman by telephone. The reports are transcribed to cylinders and are played back over the telephones when an inquiry is made.

The weather report is accompanied by a brief message from the Hathaway Oil Co. For example, the cylinder will open with a statement, such as, "This is the Hathaway Oil Co., Inc. weather forecast." It may end with the statement: "For Heat call the Blue Fleet."

The use of the term "fleet" is familiar to all seagoing people. Of course, the use of the term "fleet" is acceptable for a number of trucks. Hence, like painting its trucks blue, the color of the sea, a valuable association is utilized by the Hathaway Oil Co. Today the words "blue fleet" are synonomous with Hathaway Oil.

The oil and service trucks also convey the concept of being a clean fleet. Each piece of equipment is operated throughout the year by the same man. He takes a personal pride in the appearance of the truck which is washed once each week and completely simonized twice each year.

After a pioneering effort of schedul-

ing its deliveries on a degree-day basis, Ashley found that in his individual situation it was more economical to operate with a regular driver route system. The reason for this becomes apparent after a brief run through one of the routes. Because there is such a high degree of concentration of customers along many of the streets, the greatest volume of oil deliveries could be made within a day by each truck if it followed a specific route.

Hathaway's records revealed that 85% of its deliveries are made within a five mile radius. The company has eight trucks and drivers. Each one services about 400 customers. One additional truck is used to take care of "call-in" and special deliveries. Ashley proudly pointed to the previous year's operation of the "blue fleet" when it had no "run-outs" and very few "short-deliveries."

Hathaway Oil Co., like other firms in this area, charges its customers one-half cent per gallon for having their burners serviced. This includes a summer check-up and cleaning together with all necessary service calls during the heating season. Over 95% of the fueloil accounts purchase this service.

Bill Hendricks, the treasurer of the firm, evaluated this program. Initially, it does not represent a profit for the company. For the average customer who purchases 2,000 gallons of oil a year the service fee is only $10. One can readily recognize that a summer clean-out and a few service calls will cost Hathaway Oil Co. more than that. However, again the customer relations aspect becomes uppermost in the minds of the employees.

For one, it provides opportunities for the servicemen to get at the equipment and care for it before any major breakdown occurs. It provides an easier method to pay for service. Also, service calls frequently come in for minor causes for which the Hathaway Oil Co. might find it embarrassing to bill a customer. If a charge had to be made to replace a fuse or to throw on a main switch, it could create a certain amount of ill-will that might lead to the loss of a customer.

City Buses carry Blue Fleet advertising throughout the city.

To care for this Hathaway Oil Co. has eight servicemen, one full time trainee and one part time trainee. Each of the eight men has his own area which generally parallels the routes of the fueloil trucks. By keeping a man within one locality he gets to know his customers and their equipment better. He has, in these cases, very short distances to go between calls; thus he spends his time more productively.

The service department at Hathaway has been known to do some unusual work. Some years back it had the sad experience of having scores of its customers' oilburners ruined by the sea which flooded the cellars of many of the buildings along the waterfront during a hurricane. Now, after the Hathaway Weather Service predicts a bad hurricane in its locality, anyone in the company who can handle a wrench is enlisted by the service crew in the emergency program of removing and storing all customers' equipment that might be ruined by the incoming tides. The position of the customer is always uppermost in the minds of every employee at Hathaway. This, John Ashley noted, permeates every phase of the business and motivates all the activities of the firm.

The staff at Hathaway as a matter of course tries to provide additional services for the customer. Every day the local papers are scanned for special personal events occurring in customers' families—a birth, an important anniversary, etc. An appropriate gift is then sent to this family. It may take the form of flowers or a plant. A drawer full of responses from customers will testify to the degree of appreciation for this personal gesture.

Another interesting service is performed for many of the older folks who have no checking accounts and find it hard to come downtown to pay their bills. These folks are offered the advantage of the "Courtesy Collection Service," whereby a representative of Hathaway Oil Co. will call on these people to pick up the money for the bill. It should be noted that this is only done at the customer's request. Many of the older folks in town have expressed an appreciation for this personal service and look forward to the visit of the man from Hathaway.

Additional customer consideration is shown by the service department which takes special pains to avoid getting the customer's home dirty. Mats are used to place parts and tools on. The servicemen use plastic boots to cover their shoes when walking through a customer's home. When the work is completed everything is cleaned up as it was before.

What has all this customer service added up to? Spend several days in New Bedford and the answer becomes obvious. A company which distributes annually about 6,500,000 gallons of light oil, and 300,000 barrels of heavier oils, and has more than 4,000 customers, has become one of the identifying sign posts of the community. A walk downtown with John Ashley or Bill Hendricks will mean stopping to greet practically every second or third person you pass by.

To the employees it means steady year-round employment in an atmosphere of ease with respect for the abilities and contributions of all its members.

Northwest equalizes equipment Cost

Washington-Oregon Group pays the Difference over Gas for new Homes

ONE OF THE most imaginative sales promotion programs to show up in the oilheating industry in many years is the $100 a house assistance being given by the Oil Heat Institute of Washington and the Oregon OHI for financing sales to new home builders. This is being handled through a joint supplier and distributor group of 31 men that comprise the Regional Advisory Committee.

For six years the oil men of the Northwest have carried on a very substantial advertising and public relations campaign to make folks like oil heat. This has grown by the year until in 1959 the sum available reached $414,000 for the two states. The new equipment equalizing program is in addition to the general campaign.

It should be pointed out that this cash contribution arrangement is very new, just having gotten under way in August following organization meetings of last spring. Also it must be said that so far it's temporary; it's a test to see if builders like it. But after three months experience and the granting of cash assistance to heating jobs in 653 houses to October 31, the group is now consulting with supplier and marketer representatives to try for a more permanent arrangement.

The special fund for making the test came to $74,700 of which $48,500 was for Washington and the balance for Oregon. The dollar kitty was equally shared between refiners and distributors. It was originally planned that the assistance would be on a flat $100 per house basis, but in practice it averaged $97.60 because the fund actually made up the difference between a heating man's bid for an oil installation and his price for a gas job.

The assistance was available to any heating installer, whether or not he was also in the fueloil business and regardless of membership in OHI. There were instances where oil industry members gave more help in various ways because they had already been making some concessions to get an oil account on the books.

Perhaps the most important result of the test was that builders generally when approached liked the idea. Apparently three-fourths of those to whom the offer was disclosed would like to get in on the deal.

In making the test the committee went after fairly wide sampling by towns. In Washington actual assistance was given to one or more builders in Bellingham, Bremerton, Everett, Olympia, Port Angeles, Puyallup, Seattle and Tacoma. In Oregon it was Portland, Marion, Eugene, Klamath Falls, Salem, plus Longview and Vancouver, Washington, which are in the Oregon OHI territory.

The largest numbers were in the two large cities since that is where most operative building goes on. Portland builders got 181 assists and Seattle 321. The test was specifically limited to speculative developments, not just individual owner projects. Any new plan will include both.

Although it was not hard to get the money moving out, there was one very real drawback in this first small effort. The operators of the plan wanted to test as many builder reactions as possible with the result that a total of 165 builders accounted for the 653 houses that were helped, an average of four each. One Seattle area builder got 35. There were quite a few others that would have gone along if the OHI money had been large enough to take in their whole development. In that

Front cover of a very attractive booklet prepared by the Oil Heat Institute of Washington. Picture and text in the booklet explain the heating oil dealer's position in Washington's economic picture. Copy stresses the fact that heating oil dealers are independent businessmen, staking their success on an ability to offer the finest products and services at competitive prices. The booklet emphasizes that oil heat dealers represent "an industry which contributes millions of dollars each year to Washington's economic growth."

way they wouldn't have needed to run gas lines into the development.

One typical example of how this can affect the decision was a Seattle builder putting up 74 homes. He agreed to accept help on 24 which was all the program could afford, but then the gas company gave him a hard time on the other 50 so he cancelled the 24 oil. He would have been glad to go all oil, perhaps will another time.

Oregon Activity

The Oregon report on their share of the test shows that the 56 builders that they helped actually built this year 1,630 houses, of which 419 were heated with oil and 215 of those got the equipment allowance. In Washington the 109 participating builders put up 799 houses all told of which 438 got the cash assistance. Oregon went after fewer and larger builders, Washington tackled more and of smaller average operating size.

Naturally not all home projects were eligible for support money for oil heat. They had to be located in areas where gas or electric heating were genuinely competitive and getting considerable business . . . thus they were being considered for the homes in question.

The programs discussed as being active up to now cover as we saw Oregon but only parts of Washington, the western part where most of the population is found. Another such program in the embryo stage is for the Inland Empire OHI centering around Spokane. It was slower getting under way, raised only a few thousand dollars for the special financing project, so delayed its start to 1960. The general OHI coverage for the Pacific Northwest also embraces Idaho, with headquarters at Boise, and northern Nevada, working out of Reno.

In the total five-section area it is estimated that in 1960 there will be bought 30,000 heating jobs including not only central heating but also the permanent type of space heaters, floor furnaces and the like. Of these 39% are projected as builder development homes, 10% as individual custom built homes and 51% as replacement or conversion of existing homes.

In 1958 oil got about 38% of all new heating jobs, either central or non-central, gas got 42% and electric heating took 20%, according to OHI estimates. The goal is naturally to raise oil's share through the builder market. The total heating oil gallonage for homes has grown 34% in the period from 1950 through 1958. This was a rise from 701 million gallons to 939 million, both adjusted to normal degree days. Washington at present has 60% of this total, Oregon 28%, Idaho 9% and Nevada 3%. The largest rate of gain was in Idaho, 113% in the eight year period.

The product most vulnerable to loss to gas or electric fuels has been stove oil (PS 100) for obvious reasons. The replacement cost is low and the owners can feel that they have "modernized" without going to central heating. In 1950 this light oil represented 52% of distillate heating oil sales by distributors of the area, with No. 2 (PS 200) getting 48%. Last year the ratio was 37% and 63%, respectively.

Replacement Market ahead

The median age for all centrally oilheated homes in the Northwest is 14 years, with an equal number above and below that age . . . a good many will be ripe for replacement in the years just ahead. The median age point for oilheated homes with space heaters is now about 16 years.

In outlining the program for financing equipment differentials to help oil heat sales, it was noted that the gas industry typically spends $140 to install the supply pipe from the street and provide a meter. The electric utilities are said to spend around $300 to add each new electric heat customer in the Northwest. So financial assistance from the fuel source is not a new idea.

It was probably to be expected that the first experiment in helping to finance equipment installations would be in the Northwest. Not only are the fueloil distributors particularly imaginative out there, but equally important, the refiners have nowhere else to sell their middle distillates without the handicap of very high shipping costs. The new program for 1960 if approved will see a much larger second stage of the venture.

Oil Heat Institute Regional Advisory Committee

Vining Elmslie

M. N. VINING, Diesel Oil Sales Co., Seattle, has been chairman of the regional advisory Committee since its start in 1954 and has been reelected for 1960. The same is true of budget director Robert G. Elmslie. The other members are:

OHI CHAPTERS

Inland Empire

Jerry Deery, Deery Oil Co.; Glen Felton, Standard Oil Co. of Calif.; A. F. Lafky, Boyle Oil Co.; Ray Roberts, Great Western Fuel; William Simon, Simon Oil Co.

Nevada

George Basta, National Coal Co.

Oregon

H. C. Auld, Jr., Automatic Heat Co.; Jim Coon, Diamond Fuel Co.; Roy G. Lindsay, Economy Oil Co.; Al Loucks, Home Oil Co.; Scott Partridge, H. J. Sandberg Co.

Southern Idaho

Howard Miller, Phillips Petroleum Co.

Washington

Fred Griffin, Griffin Fuel Co.; Loren Pearce, Pearce Burner Oil; M. N. Vining, Diesel Oil Sales; W. G. Warrington, Rossoe, Inc.

SUPPLIER REPRESENTATIVES

C. L. Ainslie, Time Oil Co.; Larry Bourquin, General Petroleum Corp.; Robert Hawley, Big West Oil Co.; Hal Hutchinson, Richfield Oil Corp.; B. W. Jennings, Utah Oil Co.; Jim Lane, Standard Oil Co.; John MacDonald, H. Earl Clack Co.; Charles B. MacGlashan, Shell Oil Co.; Ed McCabe, Carter Oil Co.; A. R. Ousdahl, Union Oil Co.; Glenn R. Petersen, Tidewater Oil Co.; George B. Ronna, Signal Oil Co.; A. M. Saunders, Texaco, Inc.; H. G. Sutliff, Phillips Petroleum Co.; M. A. Tuttle (Alternate), Continental Oil Co.

ASSOCIATION MANAGEMENT

Robert G. Elmslie, Mg. Dir. OHI of Washington; Len Gassner, Ex. Sec'y. OHI of Oregon; Joe C. Langdon, Manager OHI of Inland Empire.

A Serviceman needs a good Understanding of the Parts in a fuel Unit; except for a pressure burner's Nozzle, its fuel Unit contains all the burner's oil-handling Parts

Fuel Units — the inside Story

by John W. Schulz

As PRESSURE BURNERS are serving most oilheated homes, the success of oil heat to date can be accounted largely to the good performance of pressure burners. As the typical pressure burner has a fuel unit, which contains all its oil-handling parts with the one exception of its atomizing nozzle, the good performance of pressure burners can be accounted largely to the excellence of modern fuel units.

Knowledge of the parts inside a fuel unit, and of the behavior of the fuel-oil traveling through the unit, is important to a serviceman. It permits him to do the routine work of starting up new burners, and ending air-binding of oil pumps after customers run out of oil. It permits him to recognize fuel unit trouble, and to think up and apply suitable remedies.

The oil pump in Diag. 1 has two spur gears within a close fitting housing. Don't make the mistake of thinking that fueloil moves through this pump in the direction taken by a strip of paper tugged along between the gear teeth.

The drawing shows the directions of gear rotation with the oil being pumped from left to right. Halfway between their centers, the gears are in mesh. Here, the teeth of one gear fill the spaces between the teeth of the other gear. One gear is driven by the oilburner motor. The second gear, driven by the first gear, is an idler.

As the gears spin, they continually disengage to the left of the location at which they are in mesh with each other. Here, the spaces between the teeth of each gear fill up with fueloil. Each space contains its little load of fueloil being forced from the left side of the pump to the right side. Turning clockwise, the upper gear has the spaces between its teeth filled with fueloil at the seven o'clock position, and has the fueloil forced out of these spaces at the five o'clock position.

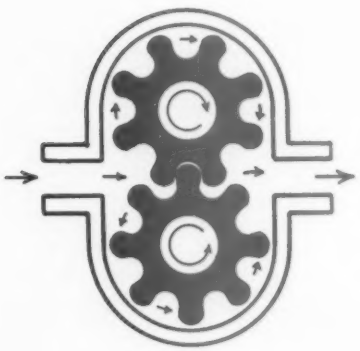
With the pump in Diag. 1 handling fueloil properly, all of the spaces between the gear teeth are full of fueloil traveling from the input side of the pump to the output side—except at the location where the gears are in mesh with each other, and the spaces of one gear are occupied by the teeth of the other gear.

The internal gear oil pump in Diag. 2 has its gears in mesh at the 12 o'clock position of both gears. As the gears unmesh, oil flows into the spaces between the teeth of both gears . . . coming into the pump through its inlet port. As the gears go into mesh, the oil is forced from the spaces between the teeth . . . and goes to the pump's outlet port.

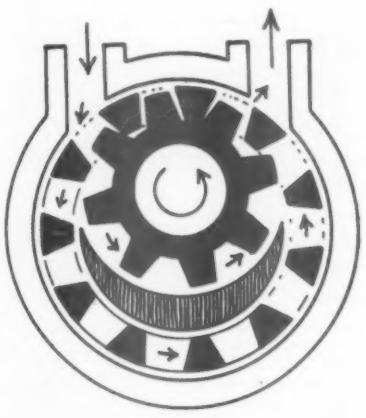
The gears of an oilburner pump won't go into action by themselves when dry. Starting up a new installation having an extremely long suction line from an outside, buried tank, for example, you may have to prime the pump.

Use the kind of fueloil which the burner is supposed to use. A pint or a quart usually is sufficient. If the installation has a suction-line strainer or filter, uncover this and fill it with fueloil. Run the burner motor for a few seconds . . . until the pump draws from the strainer or filter as much of the priming fueloil as it can. Then fill up again, run the pump again. Keep on doing this until you've given the burner all the fueloil you want to use for priming. Then replace the cover of the suction-line strainer or filter.

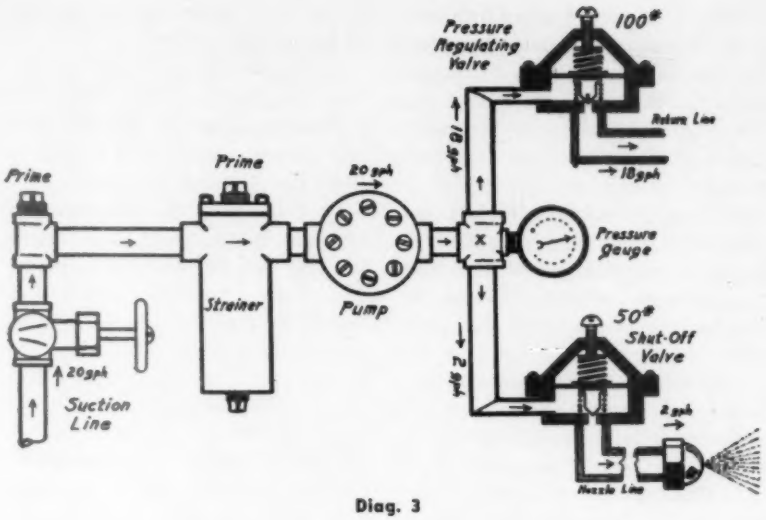
Pressure burners being started up for the first time, or which have run out of fueloil, need air-ridding in so many instances as to make air-ridding an everyday chore for the serviceman. Until the pump gears are getting just



Diag. 1



Diag. 2



Diag. 3

about 100% fueloil, after having gotten rid of all the air that was in the dry suction line, these gears do poorly at providing proper pressure for the burner's atomizing nozzle.

To air-rid a pump of a pressure burner, a serviceman can remove a pipe plug on the output side of the pump. He can remove a pipe plug from the opening that's used for a pressure gage—when a gage is applied to the burner to check on the nozzle pressure. Accompanying drawings shows where a pressure gage is used with respect to the pump. It goes on the output side of the pump.

With the plug removed (it may be merely loosened instead, if only a small amount of air is in the pump and the suction line), the serviceman runs the burner motor. Air and oil froth escape from the opening being used for air-ridding. The serviceman can use an empty can to catch the oil neatly. Suddenly all fueloil, no air, comes from the opening. The burner is turned off. The plug is replaced (or tightened if it had been loosened only), and the burner is ready to start firing.

Diag. 3 shows the oil-handling parts used in many, early pressure burners, and used today in a few burners. The parts shown in Diag. 3 serve functions served by the parts of modern fuel units.

Studying Diag. 3, consider that fueloil flows through the suction line at a rate of 20 gph, coming from an outside, buried tank. That 20 gph is the flow rate, then, of the suction line, the strainer in the drawing, and the oil pump.

The pressure regulating valve and the shut-off valve in Diag. 3 both are closed when the burner is idle. Large springs, above the diaphrams of the two valves, keep down both the valve pins. The drawing labels indicate that the shut-off valve is adjusted for 50 lbs. pressure; given oil at pressure higher than this, it will open wide.

The pressure regulator valve is set for 100 lbs. pressure. With oil flowing through this valve, the pressure on the input side of the valve will be 100 lbs.

Start-up of the burner motor and oil pump is followed by a split-second increase in the pressure in fitting "X," at the output side of the pump.

When the pressure in the shut-off valve exceeds 50 lbs., this valve opens wide, and oil sprays from the 2.0 gph atomizing nozzle. Because oil comes from the pump at the rate of 18 gph, whereas the nozzle emits only 2.0 gph with 100 lbs. pressure on it, the pump pressure continues to rise fast . . . after reaching the 50 lbs. needed to open the shut-off valve wide.

When the pressure reaches 100 lbs., the pressure regulator valve opens. Serving as a pressure regulator, it prevents further rise in the pressure the pump develops. Oil flows through the return line, back to the oil tank, at the rate of 18 gph.

Diag. 4 shows the use of an idea that was developed later than the ideas in Diag. 3. The new idea, which consists of using but one valve to serve for both pressure regulation and for nozzle-line shut-off, is used today in modern fuel units.

With the pump idle in Diag. 4, the line to the nozzle is closed. The pin of the double-function valve, at the right-hand side of the drawing, is forced down on its seat by the large, adjustable spring in this valve.

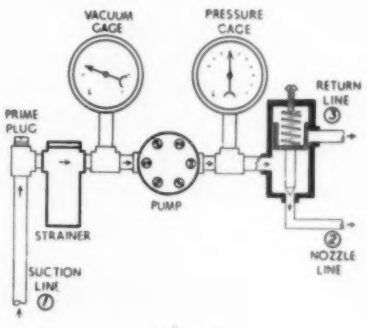
Because the piston in the automatic valve is in its lowest position when the pump is idle, passage of oil to the return line also is blocked. The piston itself, and the side wall of the cylinder in which the piston travels, form a return-line valve.

Start-up of the pump, in Diag. 4, is accompanied by a flow of oil into the cylinder of the automatic valve. Both outlets of this valve are closed to start out. Return-line opening (3) is closed because the piston blocks it, and nozzle-line opening (2) is closed by the pin.

With oil rushing from the pump into the automatic valve, the pressure in the valve (below its piston) increases rapidly. Remember that fueloil is not compressible.

Instantly when the pump starts, then, the piston must rise to make room in the valve for the incoming oil. The first, upward movement of the piston opens wide the shut-off valve, resulting in a flow of oil to nozzle line (2) in the drawing.

The nozzle will not take much of the oil coming from the pump, since the gph rate of the pump may be 20, whereas the nozzle rate may be only 2.0 gph.



Diag. 4

Therefore the piston in the automatic valve continues rising rapidly following opening of the shut-off valve in the nozzle line. When the piston's position is high enough, a side outlet in the cylinder wall is uncovered—an outlet that permits fueloil to escape from the valve into return-line opening (3) in the drawing.

Adjusting the spring above the piston causes the side-outlet valve to open at different pump pressure, thus provides means for adjusting for different nozzle pressure.

Whereas the valve which serves the nozzle line (the shut-off valve, that is) must close absolutely tightly when the burner is idle, the piston-type valve that serves for regulating the pump pressure and the nozzle pressure does not have to close dead-tight.

There's an advantage, in fact, in designing the pressure regulating valve not to close dead-tight with the burner idle. If this valve always is open slightly, it permits a burner to try to air-rid itself during an attempted start-up by a homeowner after he runs out of fueloil. Although the pump contains air and therefore cannot develop enough pressure to open either port in the automatic valve, the air may be able to escape from the pump through a pressure regulator valve that never closes fully tight.

Although Diag. 4 shows the use of a piston to move the parts in the double-function valve, in some valve a bellows is used (instead of a piston) to move valve parts designed differently but serving for the same purposes.

A modern fuel unit for a pressure burner contains parts which serve the same functions served by the parts shown in Diag. 4. These functions include:

1. Drawing fueloil by suction, developed by a gear-type pump, from a fueloil storage tank located some distance from the oilburner, and which can be at a lower level than the burner.

2. Development of atomizing pressure for the nozzle; 100 lbs. pump pressure is usual for this, though some men now prefer 125 lbs. pressure.

3. Filtering out or straining out solid particles from the oil, or otherwise preventing damage to the fuel-unit parts by solid particles that may come through the suction line.

Many men of the oilheating industry believe that every pressure burner installation should be equipped with a suction-line fueloil filter, highly effective and independent of the fuel unit. Installing such a filter makes much sense! Its use renders a fuel unit's filtering or straining equipment far less important than this equipment is without the use of a separate fueloil filter.

4. Shutting off tightly the oil line to the atomizing nozzle when the burner is idle. This shut-off valve function of a fuel unit is of maximum importance, for with the burner idle there must not be the slightest dripping of oil from its atomizing nozzle into the fire-box or on the floor below the gun tube of the burner.

5. Control of the atomizing pressure, the nozzle pressure, when the burner is running—and an adjustment that permits a serviceman to raise or lower the atomizing pressure.

Up to this point, the discussions and drawings in this article have covered two-pipe or two-line installations. These have return lines, which send back to the tank the extra oil handled by the pumps in the burners but not needed by the atomizing nozzle. Return lines should be used for installations which have tanks that are buried and located outdoors, or inside tanks far from burners or partly or entirely below burners, and which thus give the same pumping problems usually given by outside, buried tanks.

Diag. 5, however, shows the idea of using no return line . . . for a usual inside-tank installation. This idea serves well where most of, or all of, the oil stored in a nearby inside tank is located above the fuel unit of the burner.

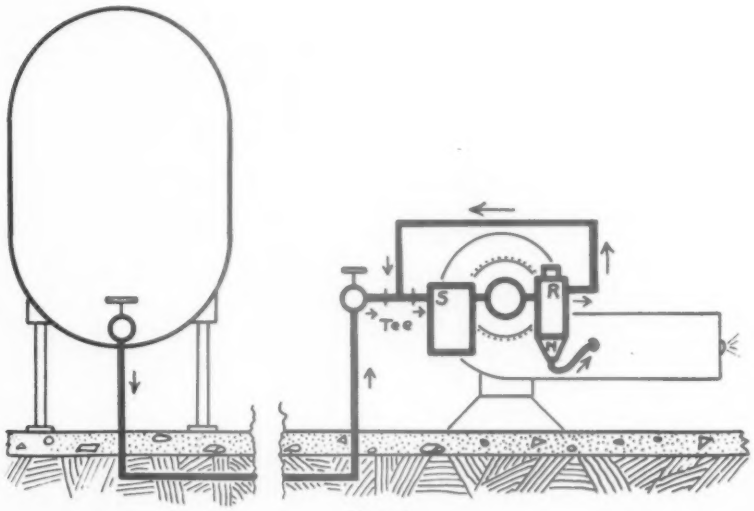
No return Lines

The idea, shown in Diag. 5, includes using piping that sends the extra oil pumped (the oil that comes out of the pressure regulator valve) not back to the oil storage tank, but into the suction-line side of the oil pump again.

In Diag. 5, "S" stands for the suction-line connection of a fuel unit; "N" stands for the fuel unit's nozzle-line connection; and "R" stands for the port to which a return line would be connected, if a return line were used.

In this drawing, an "external loop" is shown. Instead of going back to the oil storage tank (as it would if a return line were used), the extra oil handled by the pump goes back into the inlet side of the pump through this "external loop."

A modern fuel unit does not need such an "external loop," because it has an internal passage, which is used on a one-line or one-pipe installation instead of the "external loop." The bypassing of the extra oil pumped is done internally, but the action is the same as is produced by the pipe-fitting, external loop in Diag. 5.



Diag. 5

Imperial Oil's Second Mortgage Plan

by V. M. Douglas

DID YOU EVER STOP to think that we have a foreign country wedged in between a couple of our states?

Actually, those who have occasion to go to British Columbia, that up-and-coming Canadian Province on the west coast, do not think of it as a foreign country, but rather as a neighboring state which happens to be flying a different flag. In many respects the Province of British Columbia has more in common with our State of Washington than it has with most other Canadian Provinces.

Oilburning equipment made in the U. S. is recognized as standard in Canada, and petroleum products of Canada provide heat and power on this side of the bodrer.

J. J. McCurrach, as Co-ordinator, Domestic Heat Sales, B. C. Division, Imperial Oil Limited, has his office in Vancouver. He was speaking of the way the oil and oilburning interest co-operate across the border. "I just had a letter from the Washington OHI asking about our new second mortgage plan. I sent the details, but of course it remains to be seen how well the theory will work in actual practice over a period of time."

McCurrach proceeded to explain the whys and hows of their new plan which has been in effect since September. Since natural gas has been available in an almost unlimited supply, the greatest disadvantage in making oilburner sales has been the initial installation cost.

There is not enough difference in operating costs of the two fuels to exert any appreciable influence on sales. The use of automatic oil heat in British Columbia has been so satisfactory for many years that oilheating does not require selling. Many homes are being built to take care of a demand for houses in a price bracket of $15,000 to $16,000, land included.

Responsible purchasers of homes are eligible for financial assistance from the Canadian government, similar to the well known FHA loans in the U.S.A. Under some circumstances, loans are made up to 90% of the value of the property. It often happens that the prospective homeowner uses all available cash for the down payment, and then adds the maximum loan to obtain a home. This will provide him with the lowest priced heating system he can get. That means a gas fired system with a class "B" flue.

Until Imperial Oil Limited presented the second mortgage plan, any home buyer who wished an oilburning system in his new home found it necessary to eliminate or reduce other desirable features to bring the price down to the sum of his down payment and the available loan.

Increased property and building costs were recognized by Imperial. Their Marketing Division decided to put some of their resources at work to help finance home owners who desired to burn oil fuel. Their proposal reads:

> "Imperial Oil Limited will write second mortgages up to $1,200 on new homes that are heated with any make automatic oil furnace and have an oil storage tank of 250 gallons or more capacity."

Terms are simple

The terms are simple. The interest rate will be the same as specified in the first mortgage—minimum 6%. The maximum time for repayment is 7 years. Costs for drawing up and registering the mortgage will be $30, $35 or $40, depending on the area. These charges are paid by the mortgagor and deducted before payment is made to him. Provisions covering the transaction include:

- All applications for the second mortgage must be made on forms supplied by Imperial Oil.
- All applications must be approved by Imperial's Credit Department.
- Mortgagor agrees to purchase his furnace oil requirements from Imperial until second mortgage is paid.
- If the mortgagor sells his home, the second mortgage may be assumed by the new owner.
- If the mortgagor wishes to pay off the mortgage before maturity date he must also prepay three months interest.
- Second mortgages can only be written by Imperial when the home is completed and possession is secured by the purchaser.
- The property must be registered in the name of the applicant.

A measurable Benefit

By the first of November the prospects for the new plan looked very bright. If the response continues to be as favorable as it has been during the initial stages, Imperial economists estimate that the second mortgages will be directly accountable for an increase in Vancouver, of 500,000 gallons within a year.

It must not be overlooked that the natural gas interests are fully aware of the plan which has enabled Imperial to relieve the home purchaser of the necessary cash for the slight increase in the cost of an oilburning system. At latest reports the gas distributors have offered a similar second mortgage plan.

As compared with the Imperial plan, the gas proposition calls for 7% interest. Also, those who wish to avail themselves of the "gas" second mortgage are faced with the requirement that all cooking and water heating must be accomplished by means of gas appliances, as well as all space heating.

With oilheating as provided by the Imperial plan, there is no restriction in the matter of other appliances. It is often a human trait to resent being told that one must conform with undesired policies to obtain some one desired consideration.

The policy employed by Imperial may deserve consideration by others who are faced with the same problem. Actually there is no buying of business, nor does the plan constitute subsidizing. Every cent advanced is adequately secured and the oil company receives repayment with interest.

Air Conditioning Exposition features conference Session

THE DATES November 2 through 5 witnessed the 11th Air Conditioning and Refrigeration Exposition, held at Convention Hall, Atlantic City, N. J.

The exhibits featured a variety of airconditioning and refrigeration equipment, components and controls, covering residential, commercial and industrial applications. The increasingly essential role of airconditioning and refrigeration in atomic submarines, supersonic aircraft, missiles and complex weapons systems was portrayed by exhibits of the Army, Navy, Air Force and Marine Corps.

Conspicuous among the displays were a number of manufacturers of year-round heating and cooling combinations. These included the following companies, who showed the different kinds of equipment they produce for this purpose: Carrier, Airtemp, Henry Furnace, National-U. S. Radiator, Olsen and Typhoon. In addition, Bacharach Industrial Instrument Co. and Skuttle Mfg. Co. were present displaying their lines of instruments, humidifiers and air filters, respectively.

Electric heat got into the picture, too, without considering the group of companies who included heat pumps in their booths. Meier Electric's display included its line of domestic electric heating equipment along with its "Kan-Nine-Kasle," a dog house with an electric heating element.

The Exposition was highlighted by a conference session, with five speakers detailing the contributions made to our way of life by airconditioning and refrigeration. R. K. Serfass, ARI vice-president, was chairman of this November 3 conference.

One of the speakers, Herman Guttman, partner in Victor Gruen Associates, architects and engineers, discussed "Airconditioning of shopping Centers." His talk dealt principally with the installation designed by his firm in the Southdale Shopping Center in suburban Minneapolis.

The Center is an 800,000 sq. ft. multi-level structure with two department stores, 70 other shops, walking and sitting areas. All are entirely enclosed and airconditioned.

Guttman cited these reasons for the acceptance afforded the system by the tenants and the reported low heating and cooling costs encountered in the Center. There was relatively low cost space available on the penthouse roof for equipment; financing of the installation was accomplished by "standby" charges to tenants over and above rents; selection of superior equipment and an elaborate control system resulted in a minimum of operating personnel and operating cost; a formula was devised establishing tentative monthly charges, adjusted at the end of the year based on actual performance.

Another discussion highlighted the increasing importance of commercial refrigeration. The talk was by Harold J. Humphrey, president of the National Association of Frozen Food Packers, who predicted that "in the next three to four years, total frozen food production should be between eight-and-a-half and nine billion lbs., an increase of almost two billion lbs."

Building Research Conference considers Methods of Heating

THE FIRST of the new Building Research Institute multi-subject conferences was held in The Shoreham Hotel, Washington, D. C., November 17 to 19. An all-day session on the 17th covered the subject, "New Methods of Heating Buildings."

Actually, the session, aimed at the architects, contractors, engineers, builders, manufacturers, Government official and building scientists in attendance, presented a comprehensive look at what is available today and a prediction in some cases as to what can be expected in the future.

The session, chaired by John Everetts, Jr., consulting engineer, opened with a monumental study contained in a paper on "Energy and Fuels for new heating Systems," by A. Leo Jordan, Ebasco Services, Inc. The paper considered all the presently-known fuels, as well as atomic and other more exotic developments. The summary is reproduced herewith:

"The outlook for adequate future supplies of fuel and energy, in the United States and among its economic allies in the free world, is reassuring through the next decade and probably longer. Reserves of solid fuels are recognized as adequate for centuries, and extensive exploration programs for oil and gas are continuing to add to the proven reserves of these fuels, in many countries of both the hemispheres. Newer energy forms—solar radiation and nuclear—are not yet sufficiently advanced to compete with conventional fuels, but research and development are proceeding along diverse avenues, seeking the best approach to technical and commercial feasibility. When that stage is reached, solar and nuclear energy will contribute support to the proposal, already put forth, that a substantial part of the remaining fossil fuel reserves be dedicated for future use as a basic raw material in the chemical industries.

"Moreover, certain trends of the recent past have reversed themselves. The former threat of impending liquid and gas fuel scarcity, and the prospects of rapid price rise, particularly in Europe, are now replaced by problems of accumulated surplus that arise in part from large coal stockpiles awaiting markets. Petroleum and natural gas suppliers likewise have production capacities substantially in excess of current fuel demands.

"In these circumstances, the rate of construction of nuclear power plants in Europe has slowed from its earlier rapid pace. Furthermore, the European nuclear program recently reshaped to give greater weight to improvement of designs, than to immediate installation of large generating capacity—advocated in order to relieve demands on conventional fuel resources and for unrelated reasons—now more nearly resembles the policy planned by the United States.

"The new principles embodied in so-called "direct conversion" methods for power generation, whereby chemical energy, heat and nuclear energy may be transformed into electric power without first making steam or hot gases to drive a turbine generator, are still in their infancy. Whether they may some day be able to compete, except for special applications, with conventional methods will depend on successful solution of many technical problems, as well as on the extent of the concurrent advances in conventional power production methods. Not until small package-power units have become successful in military establishments, and for such services as aircraft and ship propulsion, will it be practicable to consider them for power and heat supply in buildings.

"At hearings during October here in Washington before a Joint Congressional Economic Committee, on future energy requirements and resources, expert opinion was submitted to the effect that: 'conventional energy sources should continue to be available, at least through 1975, at no appreciably higher constant dollar cost.' The findings from information assembled selectively and analyzed in this paper, are substantially in agreement with that surmise."

Developments in warm air Heating

Reporting on developments in warm air heating was Herbert T. Gilkey, National Warm Air Heating and Air Conditioning Association. He predicted that the heating industry is "on the verge of major break-throughs which will result in designs using new materials and techniques."

He cited the furnace heat exchanger as one example of design improvements to come. "The furnace heat exchanger can be made a great deal smaller as a result of some new developments. For example, a direct fired heat exchanger of about the same size and configuration as the cooling coil on an airconditioning unit no longer stretches the imagination."

Gilkey emphasized system awareness and design, pointing out that the "heating system is unlike any other component which goes into a residence. This system literally is manufactured on the job." Thus to properly evaluate the performance to be expected from a heating system, "we must take a look at the man who designs, installs and adjusts this heating system. He is the all-important factor in the system performance. He can make or break the system and neither a platinum furnace nor 24-karat gold diffusers can alter this fact."

Gilkey described several recent developments in equipment either in research or on the market. These included catalytic-surface combustion; thermionic conversion; induced draft oil furnace; heat pumps, controls, duct materials, humidifiers and outlets.

Developments in hydronic Systems

Third speaker was Harold A. Lockhart, Bell & Gossett Co., discussing "New hydronic Systems." He defined hydronics as a new industry designation for the art of heating and cooling with liquid, vapor or steam. It makes

use of all fuels, he went on, including solar energy, as a means of transferring energy from its source to the heat distribution system.

Also, he said, hydronics has as much interest in cooling as in heating.

The principal portion of Lockhart's talk was devoted to a description of an improved method of control and piping in hydronics referred to as primary and secondary pumping. This consists of two parallel circuits, with a low resistance maintained between the circuits so that one pump has practically no effect on the other. Using a three-way valve permits precise and economical control and because this system breaks up a complete heating system into smaller units or zones, it is possible to use smaller pumps and valves.

Lockhart cited one example wherein a standard system required total pump capacity of 15 hp; with the improved system, however, he said the requirement was reduced to 3 hp.

This is a flexible system, he continued, and may be used for heating and cooling zones, for domestic hot water, snow melting, radiant panel zones or almost any other variation or combination.

Lockhart pointed to the growing acceptance of high temperature water in heating and expressed the opinion that in the near future systems using temperatures from 250 to 300 degrees will be much more common. He explained that these systems will be able to use standard, presently available equipment and provide all of the advantages of systems that can be designed for much higher temperatures, but which then need special and more expensive equipment.

Radiant Heating

A discussion of radiant heating by Prof. J. Raymond Carroll, University of Illinois, was largely historical with examples of radiant panel systems. However, he did look at the future of radiant heating by suggesting these areas for development:

"The ever increasing use of glass in buildings and the trend toward outdoor and open air living will dictate the future use of radiant heating. Very small, unobtrusive, elements emitting high intensity infra-red only could be mounted in the walls or ceilings around large glass areas to counteract body radiation loss to the cold glass area. At the present, all types of radiators (steam, hot water, or electric) are at such low temperatures (150°F to 250°F) that their surface areas are excessive in order to control radiation.

"In addition to the small high intensity infra-red emitter, all interior surfaces of buildings will be warmer. Naturally, one method is to use more insulation. However, this has been preached for years and it is not new. The next step is to artificially add heat to the interior surface of exterior walls. It is possible that future walls, floors and ceilings will have electricity conductive films embedded or adhered so that one or more of these surfaces may be varied in temperature as the exterior weather changes.

"Other areas that have not been properly explored are the draperies, curtains and blinds around windows. Electric blankets have been successful for years. It should be simple to develop the electric drape. This would do much to solve the cold window problem.

"Last, but not least, is the possibility of warming the glass itself. Since cold glass areas are the major concern it is only natural that eventually we will be able to buy electric window glass. Perhaps it will be a plastic, but in any case it will be insulated against high heat loss to the cutside by additional glass or plastic surfaces.

Outdoor living, and various commercial and sports events will definitely require radiant heating in the future. Outdoor theatres, porches, swimming pools, cafes, shopping centers, show windows, bus and transportation centers, drive-in theatres and restaurants, football stadiums, golf courses, gas stations, race tracks, snow melting and so on ad infinitum, are all future possibilities for specular radiant heating.

"In all cases, it should be noted that the net effect of using radiant heating in buildings or in outdoor areas is to allow the human more comfort and warmth with less clothing. This allows for more freedom of movement and should increase general efficiency and comfort and safety in many industrial and commercial area. How far we can carry the trend of more radiation and less clothing into open air sports and into private living remains to be seen. However, it should be reemphasized that comfort does not depend upon radiation alone. A comfortable environment is one that includes a gentle but continuous air motion in order to control convection and evaporation losses. Since the modern home is a completely sealed and air tight building, some mechanical means must be used to create air circulation. And, since present methods of summer cooling also require mechanical air circulation, it is obvious that a combination of radiation control and air control will constitute the modern comfort control system of the future."

Electric Heating

Frank Faust, General Electric Co., was the fifth speaker, with electric heat as his topic. He described the growing importance of electric heat for homes, citing the half million homes now employing electric resistance heating, plus some 80,000 heat pumps installed in the past seven years. Faust chose technological advances and, particularly, a general drop in cost for electricity, as principal reasons for the growth of electric heat.

He said that while other fuels appeared headed for continued increases in price, electricity stood a good chance of continuing to decline. On this reason alone, Faust expressed the opinion, that electric heating now can compete in a great number of areas and provide complete house heating at a cost at least no higher than with presently used fuels.

He also noted that an increasing number of electric utilities are actively promoting electric heat. One reason for this in some areas is that the installation of summer airconditioning has provided summer peaks that

(*Please turn to page 94*)

Coinsurance can break You

A Return of 52¢ on a Dollar after a Fire could mean financial Disaster

by George A. Strader

IF YOU carry fire insurance on business property anywhere in the United States, the chances are that your policy contains a "coinsurance clause." If you do not understand this clause and fail to comply with its rigid requirements you can, even though "fully insured," lose the right to collect the full amount of your loss after a fire.

You could be insured for $50,000, for example, and yet be legally entitled to collect only $12,500 after a $25,000 fire, under the limits imposed by this little known and badly misunderstood clause.

Let me illustrate:

The owners of an Eastern firm, with current insurable values of $150,000, were carrying a total of $50,000 on their building, fixtures, machinery, and inventory at the time of their fire. The amount was ample at the time they bought the coverage.

But additions to their capital assets over the years, expanding inventory, and above all, spiralling inflationary values, had stepped up their insurable worth to $150,000. The owners were aware of this—in fact, they sealed their own financial loss by bragging about their real worth to a watchful insurance adjuster—but, not aware of the meaning of the coinsurance clause in their policies, they felt that they still had ample insurance to cover any fire that might strike them.

When fire did strike, it left a $25,000 shambles behind it. The owners had $50,000 coverage—plenty, they complacently assumed. But their recovery was for just five-twelfths of that amount; the insurance company's check, in *full* settlement of their loss, was for just $10,415. And the settlement was legal and fair.

The coinsurance clause in their policies required them to carry insurance to the full extent of 80% of the full current value of their business; and, in the event of their failure to do so, their right to recovery was limited to only that proportion of their loss which the amount of insurance that they carried bore to the amount that they were required to carry.

Let's figure it out.

They were required by the coinsurance clause in their policy to insure their business for a full 80% of its full current value; i.e., the current value being $150,000, they were required to carry $120,000 on it.

But they were carrying only $50,000, just five-twelfths of the required amount. So, in the event of a loss—and that means any loss, no matter how small—their recovery was limited to only five-twelfths of the loss.

Their loss was $25,000.

They carried only five-twelfths of the amount required by the coinsurance clause.

Recovery was therefore limited to five-twelfths of the loss—$10,415.

The amount was both legal and fair because they had exposed $150,000 in assets to loss; why should the insurance company pay in full when it was receiving a premium not sufficient to cover even one-half of the assets exposed to loss?

Moreover, the companies really intended coinsurance to serve a beneficial purpose; to provide a 20% discount as an inducement for full coverage against the average fire. The companies could require 100% coverage but, being aware that there are few fires that cause greater than 80% destruction, they are willing to provide full 100% protection, at current valuations and up to the face amount of the policy, for only 80% of the premium required to protect the property in toto.

But very few policyholders understand either the benefits or dangers of coinsurance. Many never heard of it, or of the closely related 60%, 70%, 90%, and 100% clauses—reference to which has not been made because of their relatively infrequent use compared to the 80% clause.

Particularly dangerous is the widely held misconception that "the companies settle for only 80% of the loss." This is quite untrue. The companies settle for 100% of the current value of the property damaged, up to the face of the policy, if the policy holder complies with its conditions. That 80% applies to the insurance buyer, not the company; it is the buyer who must settle for 80%, in premium payments, in proportion to the full current value of the property insured.

One of the largest national appraisal companies is authority for the statement that fire losses, in the aggregate, are settled for an average of only 52¢ on the dollar; and that many of the settlements run as low as 14¢ on the dollar. These are not the sort of settlements conducive to a quick recovery from a disastrous fire.

Review your additions to capital assets frequently; take inventory frequently; adjust values in the light of the still-continuing inflationary spiral; be sure that your protection is not only adequate to meet your average annual level, but your seasonal peaks also. Don't take chances with underinsurance; dangerous in itself, it also brings into play the further losses arising from coinsurance.

According to an appraisal company fire losses are settled for an average of only 52¢ on the dollar. Many settlements run as low as 14¢. The phrase "fully insured" is meaningless if the policy contains a coinsurance clause that is not being abided by. A large strong company might be able to absorb such fire losses, but the smaller firm would be hard put to make up such losses.

This new delivery truck operated by Charleston Oil Co. is a far cry from the fueloil delivery methods employed in the early, formative days of the company.

Charleston (S. C.) Oil Company marks its Fiftieth Anniversary

CELEBRATION of its 50th Anniversary is being observed by the Charleston Oil Co., Charleston, S. C. The company has grown with the expanding use of fueloil locally to become a leading marketer for domestic heating oils in the area.

T. Wilbur Thornhill, president of the company is the son of the original founder. He was with his father from the very beginning helping in the construction of the first storage tanks and driving the mules that pulled the first tank wagon.

Back in 1909 it was a major operation to have fuel delivered to your home for lamps and heating. The operation ran the gamut from bottles to barrels to tanks—all horsedrawn, of course. Communications were slower to say the least, everything certainly moved at a slower pace and the grade of kerosene used for heating then was a far cry from the highly-refined product delivered today by Charleston Oil.

Founders of the company 50 years ago were: J. T. E. Thornhill, H. C. Boardman and R. H. Pinckney. Thornhill bought out his partners a few years later and the company has remained in the hands of the Thornhill family since. As early as 1890 the elder Thornhill sold kerosene in the Augusta, Ga., area as a sideline to his engineering business.

Present operation of the company is in the hands of T. Wilbur Thornhill, president; E. J. Thornhill, vice-president, secretary and treasurer; Van Noy Thornhill, son of T. Wilbur, general manager; E. J. Thornhill, Jr., manager of the heating and airconditioning departments.

Charleston Oil's offices originally were located at the corner of Meeting and Mt. Pleasant Sts. The first office at this location actually was built in an old box-car left there by the Southern Railway. Subsequently an office building was constructed at that location in 1914, which lasted until the present offices were put up in 1947. The company now has its main plant and offices just outside the city; in addition there are storage facilities in surrounding communities.

Kerosene was the product which put Charleston Oil in business, sold under its trade name of "Sunlight Oil" until 1940. Thereafter it was marketed as kerosene and the volume gave way to fueloil. In 1946 the company became a Shell jobber.

The fast, efficient service rendered today by Charleston Oil comes from a determination to bring to its customers increasingly better and more comfortable living in South Carolina homes.

An early 1900 Charleston Oil delivery truck, which was regarded at that time as a mechanical marvel. Kerosene for lamps and heating was the principal product.

T. Wilbur Thornhill

Boston Home Heat Council honors Dr. Dooley as Splendid American

A GROUP of New England independent fueloil dealers recently showed they are just as interested in heart-warming affairs as house-warming business. The illustration was a presentation to Dr. Tom Dooley of the first annual "Splendid American" award by the Better Home Heat Council in Boston. The award might well have been considered window dressing because, in back of all the planning for the award dinner, there was an undercurrent of scheming by the committee members to raise funds for the continuation of Dr. Dooley's work in Laos.

In presenting the award, Wat Tyler, chairman of the Better Home Heat Council, summed up the aims of the group when he said, "The motivation to do good must come from the heart and with the belief that an enlightened sense of social responsibility will supply warmth, comfort, well-being, peace of mind and security among peoples of the world. Dr. Tom Dooley represents ideals which can be adopted by small businessmen everywhere."

To the 600 persons gathered in the Hotel Somerset, the doctor was magnetically inspiring and they sat in tense, quiet, eager attention, broken only by impulsive response to his delightful humor. Many have called Dr. Dooley a living saint, but he quickly denounces this and calls himself a simple doctor who has found happiness in his work.

Telling of his experiences, the doctor said, "To have order, rest and peace in the world we must do it ourselves—as individuals. We can not 'fluff' it off on others. We must take to Asia and other far-off countries the love we possess. We must believe in the humility, goodness and humanity of man. We must (as one of my corpsmen said) take care of people who 'ain't got it so good'."

He pointed out that very few people in this land of plenty realize that every night one-half the people of the world go to bed a little bit hungry; that one-half the people of the world live and die without ever having been treated by a doctor.

Since being forced to return to this country in the spring for a cancer operation, Dr. Dooley is making a nationwide, whirlwind 37-day lecture tour in 40 cities. In a matter-of-fact, cool, and casual way, he told his audience, "I have a 50-50 chance of survival—if I can survive this speaking tour." His doctors estimate he has only several months to live but he wants to return to Laos, where, he says, he has the largest practice in the world—a half million people!

There were serious, determined, yet happy people in the hotel dining room after they heard and watched this dedicated young man frequently hold his hands in a prayerful attitude close to his mouth from which came poignant phrases of pathos, humor and appeal.

As the people left the dinner, spontaneous donations were heaped on the silver tray of the Splendid American Award for support of his work. Some emptied their pockets and pocketbooks; $3550 was collected and a sizeable donation was made by the Better Home Heat Council. An almost equal amount has since been forwarded through BHHC to Medico, Box 2, Times Square, New York.

His story has been told and retold, however, no one who has met this man can help doing just as this writer is doing—repeat his story over and over in the hope he can get more funds for his organization: Medico. Officially known as Medical International Co-operation, it greatly depends on the largesse of just ordinary people. A large percentage of its revenue comes from students in high schools and colleges throughout the country.

Dr. Albert Schweitzer inspired the people of Medico and they are trying to carry out his dreams of bringing medical care to the neglected people of the world. It has no political ambitions yet, with a medical bag in one hand, the American flag in the other and love in their hearts, these men have, in the image of God, served humanity and their country well.

Wat Tyler (left) reads the citation on the tray given to Dr. Dooley.

Inscription on "Splendid American" Award

Somewhere among the citizens of our nation each year, an ordinary human being becomes extraordinary.

This Splendid American Award is given annually by the Better Homes Heat Council to an outstanding person in our country whose individual contribution towards his fellowman has exceeded the normal expectation of society.

This award is made primarily for achievements which tend to raise the dignity of the individual, relieve human suffering, and foster a feeling of well-being, peace of mind, and security among peoples of the world.

Dr. Thomas Dooley
Splendid American
Boston
November 1, 1959

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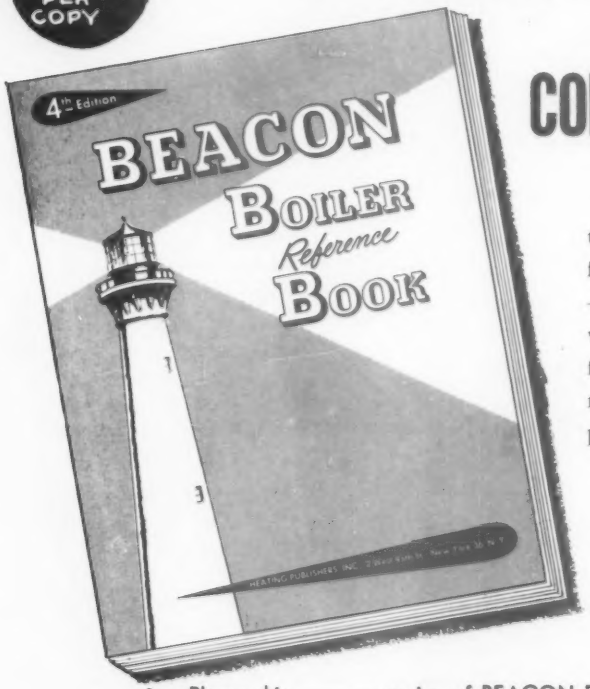

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Modern Oilheating for Schools

Part 4—N'th degree of Safety is Oil's strongest Point if gas Heat is considered; Certainty of fuel Supply is next

by Jean L. Dupuis

WHEN PLANS are being made to erect a new school, advocates of different types of fuels are bound to be on hand to do their best to advance their different fuel causes—to attempt to have the new school use the type of fuel and heating equipment to which they are dedicated.

That can be expected. Each fuel that can possibly be used, in a new school which is being planned, can be expected to be represented by men who argue that their particular fuel is best for the school.

So that it does not lose by default, by failure to represent itself adequately when school heating problems are being discussed and resolved, the fuel-oil and oil heat industry should be well represented at school planning sessions.

To argue for using oil heat in a new school can be a pleasure. No tricks, mysterious arrangements, or crafty arguments are needed. Oil heat stands out as best for a new school on three scores:

First, it leads to yearly heating costs which are pleasingly low.

Second, it provides unequalled safety, which is invaluable to those who have the responsibility for arriving at the important decisions about the new school.

Third, it provides great security with respect to the day-by-day availability of fuel for heating and water heating; this security comes of having thousands of gallons of fuel stored on the school premises . . . having enough fuel on hand for weeks and weeks of winter weather. Also, any of several local suppliers of fueloil can rush in truckloads of fueloil, from vast bulk plants not far away, any time more fueloil is needed.

If a proposed new school can receive gas for heating through pipelines, gas-heat experts almost certainly will be on hand when heating details of the school are being discussed . . . to argue that it should be heated by gas.

Three Points of Emphasis

The oil-heat men, fighting gas heat mainly in an instance of this type, can draw up their arguments along the three lines just mentioned. They can stress that oil heat is: (1) economical with respect to yearly heating costs, (2) unequalled in its safety for the building and the occupants of the building, and (3) dependable to the extreme with respect to the day-to-day availability of the fuel.

Pinpointing the economy of a fuel, or arriving at the actual yearly heating costs for a particular school, is simply a matter of arithmetic . . . as earlier articles in this series have pointed out. Fighting gas heat by starting out with the first of the three lines of argument is easy. It includes comparing relative fuel costs of gas or oil, and comparing actual, total, yearly heating costs using gas or oil.

Buying the gas for heating, the school will obtain a certain number of Btu's for each cent spent on the gas. Multiply this by the efficiency at which the gas will be used, and you obtain a figure for the number of usable Btu's spent per one cent on gas for heating.

Buying fueloil for heating, the school obtains a certain number of Btu's for each cent spent on oil. Multiplying this by the oil-fired plant's overall efficiency gives the number of usable Btu's obtained for each cent spent on oil.

Such simple figuring tells quickly which fuel, oil or gas, gives more usable heat for each one cent spent on the fuel. It leads to figures which tell

fueloil & oilheat

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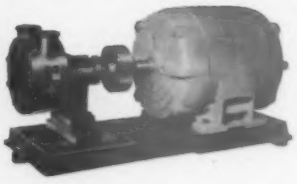

When oils of No. 2 to No. 4 viscosity are handled, a pump that operates at direct-motor speeds is frequently the proper choice. With the new Kraissl direct-connected Class 60 pump, speeds of 1200 or 1800 rpm can be used on light oil—without developing undesirable cavitation.

Fig. 1, below, shows areas of most-effective operation; Fig. 2 indicates high suction lift characteristics of the Class 60 pump—based on 150 S.S.U. oil at 1200 rpm.

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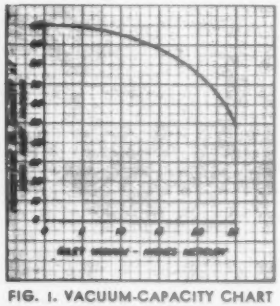

FIG. 1. VACUUM-CAPACITY CHART

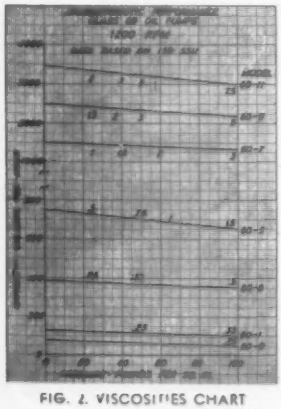

FIG. 2. VISCOSITIES CHART

Write for Bulletin 1904

KRAISSL CO. Inc.

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by what percent the costlier fuel is more expensive than the other fuel.

Using figures which represent the total heat loss of the particular school building, and its hot-water requirements, the oil-heat expert can go on to yearly fuel-cost figures, and to total yearly costs for heat and hot water . . . with the school using either oil or gas.

Oil heat works out to be surprisingly inexpensive in most instances. Figures drawn up for a particular school, on the basis just explained, prove this. In every instance, the men representing the fueloil and oil heat industry should draw up their own figures for the comparable costs of oil heat and gas heat, and for the yearly costs of heating the particular school using oil or gas. Figures drawn up by only gas-heat men, and presented to the men making the decisions about heating the new school, may favor or lean towards gas heat to a degree not acceptable to advocates of oil heat.

In some instances, true enough, the total yearly costs of heating a particular school may be somewhat higher using fueloil than using gas. Yet the actual, true figures should be known to oil-heat men—in fact, should be drawn up by these men themselves. Where oil heat costs somewhat more than gas heat in overall, the oil-heat men should know precisely how much more it costs.

That covers the first of the three, important factors, which have been listed; it covers the slant of total, yearly heating and hot-water costs . . . using oil, and using gas.

Next, to be discussed with the men planning the new school, are the factors of the unequalled safety of oil heat in a school, and the dependable, day-to-day availability of the oil needed by the school's boilers or furnaces.

The unequalled safety of oil for heating a school is invaluable; no price can be applied to it. If any other fuel were to cost half of what oil costs on a Btu basis, or were to lead to half the overall yearly heating costs of oil heat, oil heat still would be preferred by men who want the n'th degree of safety for the school and its occupants. School authorities who make a point

COMMERCIAL & INDUSTRIAL oilburning

of maximum safety within a school regard oil as the premium fuel, though it may cost more than another fuel . . . because they want that maximum, n'th degree of safety which is provided by oil heat.

The preceding points apply particularly, as was covered earlier, where gas heat is being considered for a school. These points apply to the two kinds of fuel, oil and gas, which flow through pipes.

Safety of Fueloil

The safety of fueloil, which is not equalled by that of any other fuel that can be used in a boiler which is fully automatic and unattended, relates to the fact that fueloil dripping from a leaking pipe, for example, is not ready to burn or explode. Leaking fueloil remains liquid and stays put; it does not mix with air and form a combustible or explosive mixture that can travel and fill a building.

Before it can be burned, fueloil must be vaporized by heating it, or atomized by such atomization arrangements as are found in oilburner systems. The heavy grades of oil, which are used in many, large schools, must be heated to reduce their viscosity sufficiently for sending them through pumps and pipes designed for liquids as thick as molasses.

Boiler-room fuel-handling systems, through which flow fuels which are either gaseous or liquid, are made up of pipes, fittings, valves, and specialty devices. Such systems, which commonly have appreciable pressure in them, may develop leaks. The fittings, valves, and specialty devices themselves have not gained a reputation for remaining 100% free of leaks. Pipe joint connections, made by men who install and service the equipment, cannot be depended upon to remain 100% free of leaks.

Fueloil does not escape rapidly (as gas does, for example) when an ordinary leak develops in a pipe, fitting,

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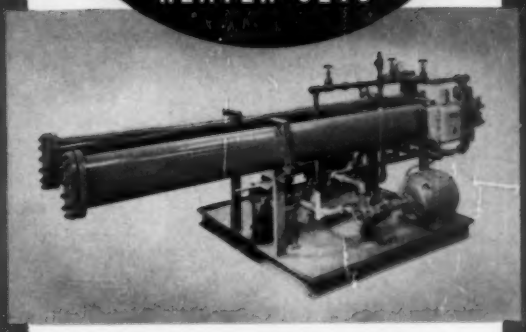

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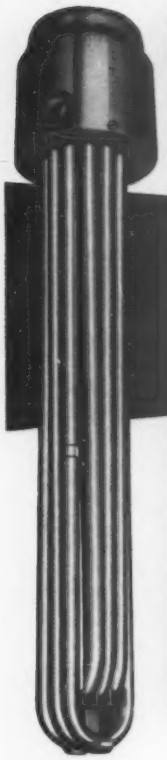

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or specialty device that's under pressure. When a leak occurs, a small amount of fueloil slowly escapes. Usually the result is a little puddle of escaped fueloil. This is not dangerous; it remains in one place, and is not in a state ready to burn or explode. Not only can it be seen easily, but it draws attention to itself by sending out a strong odor.

The escape of a pint or quart of fueloil, from an ordinary leak, is nothing to be alarmed about, and is quickly detected.

A modern commercial-industrial oilburner has electronic safety controls which serve two functions, highly important and accomplished only during the past decade:

1. These electronic controls make certain the oilburner's ignition system is working in a strong and dependable fashion, before the oilburner is permitted to spray atomized oil into its combustion chamber; 2. If the oil flame wavers or tends to die out when it should be burning normally, these electronic controls cut off the flow of atomized oil to the combustion chamber quickly—within four seconds!

Because oilburners now have such ultra-safe electronic controls, today oilburner men no longer encounter the low-powered "puffs," "sneezes," and "snorts" from high-capacity oilburners, which years ago were a source of humor for them.

One practical serviceman, who works on gas-heating and oilburner equipment, sums up the situation this way:

"In the old days, a mischievous big oilburner sometimes fooled around. While I was in the boiler room, it let out a bang as if a big paper bag full of air had been busted. For oilburners, things have changed. They no longer fool around like that, because electronic controls have tamed them entirely.

"For gas firing equipment, things have not changed. The results of gas leaking from pipes, and then being touched off, never could be figured as just fooling around. Today a situation which includes a gas-filled room or building still demands as much respect as it ever did."

Fueloil dripping from a pipe does not put fear in a serviceman's heart. A liquid, fueloil is not ready to blast off, or even to burn. To prepare it for burning even in a red-hot combustion chamber, fueloil must be atomized first.

The tremendous value in safety, gained by using fueloil in a school boiler room, cannot be figured in yearly dollars and cents—any more than the value of human lives can be figured in dollars and cents.

Men determined to gain the n'th degree of safety in a school building will select fueloil as the fuel to be burned automatically in a furnace or boiler. They will do this even though the use of another fuel, not as safe as fueloil, might result in overall yearly savings in heating the school building.

Oil heat is not the cheapest heat, in terms of yearly heating costs, for every school building. It's just the safest heat that can be used in a boiler or furnace fired automatically . . . in a boiler or furnace which is fully automatic and unattended.

The third score on which oil stands out as the best fu for a school, listed earlier, has to do with the great security the school executives gain as the result of the day-by-day availability of fueloil for water heating and heating the building.

Fueloil can be bought at competitive prices from any of several local oil companies. Any of these companies can rush in truckloads of fueloil, from bulk plants of vast size and located not far away, to match the school's requirements.

To top things off, enough fueloil is stored in large tanks on the school premises to heat the school for weeks and weeks during coldest winter weather. The school's fuel supply will not be cut off any day, any minute, because of strikes, severely cold weather affecting gas-main pressure in the locality, or catastrophies occurring along the path of the gas pipe lines serving the locality.

More of what it takes . . . that's what Mobilheat has! More customer satisfaction built into it! More progressive . . . and aggressive . . . selling power behind it! And for the final proof . . . more *customers!*
If you want to build your business around the fuel oil that leads the field in every way, call your Mobilheat representative . . . and talk business!

Mobil

Mobilheat . . . *America's largest-selling heating oil*

fuel oil & oilheat

Truck Talk

by Chet Cunningham

ONE OF THESE DAYS you may be delivering fueloil, making service calls and delivering new furnaces on cars and trucks with no wheels.

The reason is the almost overlooked development of the vehicle that travels on a cushion of air. It slides six to twelve inches over the ground on a cushion of moving air.

Curtiss-Wright has been a leader in this type of rig, and now they have an air-truck on their drawing boards that looks something like the sketch. Present specs list this truck at a 7,500 pound payload.

The air-car or truck eliminates all drive line components such as transmission, torque shaft, differential, axles, wheels and of course tires. The big three also are interested in this new type of automotion and are pouring millions of dollars into projects.

After more than 6000 years it looks like the wheel may be nearing the end of its monopoly in transportation.

To save time, money and nerves, replace the front and rear brake blocks at the same time. On some trucks this may be hard, but every effort should be made to change blocks in complete sets.

For example, the rear linings wear out and are replaced with new ones. The front linings still have some service in them, but they will go out in a few thousand more miles. When that happens a big difference in friction will exist between front and back blocks. The new linings then are forced to do excessive amounts of work.

That means high temperatures and shorter life. That also speeds up the polishing and glazing of the front linings which in turn means they do less and less work. This then leads to the rapid wear of the new rear linings, locking of wheels, squealing and brake grab.

The fact is, mismatched brake blocks can wear out so fast, that in the long run it is much cheaper to replace the whole set at once. For better braking, at less costs, replace front and rear brake blocks as sets.

Pardon my hateful attitude, but for me this is "hate accident month." Besides, most accidents aren't really accidents, they're simply sloppy mistakes.

It's been proved time and time again, that courtesy and accidents can't sit in the same cab. A good grounding in driver courtesy is a basis for every truck driver — especially drivers representing your company in heavily traveled city streets. Even if you only have one driver, it will pay you in the long run to pound some driver safety into his head. He only drives a pickup? Then that's only $2,000 if he dumps it into a ditch or a ravine. But there could be a $100,000 lawsuit involved, in addition.

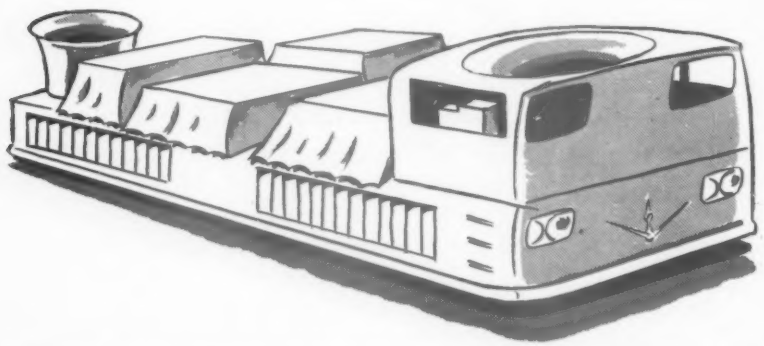
Safety is a day-by-day business on a year-round basis. Some construction outfits take pictures of every company wreck. Your company can do the same thing. Display the pictures where other employees can see them. And type up a neat paragraph explaining who was driving, what happened, the injuries and cost of repairs and down time for the truck.

The positive approach works, too —make safety awards for good driving records. Do it up right with wrist watches, radios, rings. Expensive? Sure, but have you ever pulled a tank truck out of a river, or paid higher insurance premiums because of your bad safety record? That is much more expensive.

Be sure your drivers let their engines warm up before putting any load on them. This is especially true if you have any diesels in your oil delivery fleet. These nippy days it's more important than ever. The larger the engine, the more warming it needs. You can't do the job quicker by reving up the engine, either. Rather, run it at a fast idle for three or four minutes. Check the oil and air pressure. Then increase the rpm's and run for a few minutes more to allow for good circulation of oil and even the slow expansion of piston liners, shafts and bearings. Then when it's at operating temperature your engine is ready to move that oil wagon out without any complaints.

How many times in the last few days have you seen cardboard, newspaper or even old raincoats stuffed in the grills of trucks to cut down on air flow and make the engine run hotter? It's hard to convince some truck drivers that this simply should not be done. First check the thermostat to see that it is working correctly. Then warm up that engine as outlined above.

Think of your engine compartment as a wind tunnel designed to carry off heat produced by the engine. Any modification made in the air flow can open the way for some serious heat caused breakdown. Keep that old cardboard in your shoes—not in your radiator.



Look, no tires! Yes, the car and truck of the future may be supported by a layer of air, not wheels. This Curtiss-Wright model truck will pull up to 7,500 pounds. It's on the drawing boards now.

COMPACT N Model MACKS for modern fuel handling

New Mack Model N COE's combine outstanding reliability—a must where home fuel oil deliveries are concerned—with every feature needed for economy, bonus payloads and fast action in and out of congested areas.

Here's a truck specially designed to handle your kind of work . . . to give unmatched performance and traditional Mack reliability throughout its fantastically long prime of life. Here's a truck whose styling helps build your business prestige wherever it's seen . . . that's packed with features that make it the choice of dollar-conscious fuel oil dealers throughout the nation.

Only the Mack Model N COE's give you all these job-tested features: Choice of Mack engines—gasoline, diesel or turbocharged diesel—from 150 to 205 hp... Mack-built cab with tilt-cab action for full engine accessibility . . . truck and tractor models...low step height for easy entry-exit—flat cab floor available on models where both right and left side entry is desirable . . . panoramic, wrap-around windshields . . . advanced Mack steering systems for utmost maneuverability . . . air-boosted hydraulic clutch . . . choice of Mack transmissions, brakes, frames and suspensions . . . 4- or 6-wheel models with option of famous Mack Balanced Bogie.

For the names of firms that are already cashing in on the advanced profit-power Mack Model N's, contact your Mack branch or distributor. Mack Trucks, Inc., Plainfield, N. J. In Canada: Mack Trucks of Canada, Ltd., Toronto, Ontario.

7198

MACK
FIRST NAME FOR
TRUCKS

Becker heads API Committee

(*Begins on page 49*)

uses as with underdeveloped uses of present concepts. We need lower capacity burners, lower cost burners; we particularly need better information and communications between present industry sources, he feels.

Tom Scott, Buckley & Scott, Watertown, Mass., reported as chairman of the Market Development Subcommittee. This is a newly-formed group whose responsibility can best be stated in the opening lines of the Scott Report:

"The fundamental objective of the Market Development Committee is to develop a plan to sell on as broad a scale as possible new equipment which will be developed by coordinated industry research efforts. To achieve this result it must draw together all available industry information which has been put together by OHMR, NFC and other sources, and develop the plan in four steps:

"1) Define the existing markets for No. 2 fueloil; 2) Determine the factors that influence the growth of fueloil sales; 3) Recommend means of improving the climate for fueloil growth by markets; 4) Develop a merchandising plan for dramatic new equipment to be brought forth from the research effort."

Mailing delivery Tickets

Hollis Albert of Baltimore reported on the problem of leaving delivery tickets at the house, as against mailing them, in light of the recent recommendations by the National Conference on Weights and Measures which is considered quite detrimental to the most economical operating methods for fueloil distribution. Chairman Blickensderfer asked Albert to carry through by enlisting more industry support in early months to try and prevent the Weights and Measures document from getting into state laws. He is also to petition the W&M authorities to officially change their views at the time of their annual meeting next June.

As reported in FUELOIL & OIL HEAT, November, page 44, the new Pennsylvania law on this problem could serve well as a model for others. It requires that every truck delivering fueloil in the state be equipped with a ticket printing meter and that the customer billing show the meter imprint . . . but this may then either be left at the house or mailed.

J. L. Minner of Shell, chairman of the Time and Place Committee, announced that the Spring Workshop session of the Fueloil Committee will be held at The Homestead, Hot Springs, Va., on April 18-20, 1960. The group also voted to hold its following Spring session at the Grand Hotel, Point Clear, Alabama, April 27-30, 1961.

At the close of the Chicago meeting four marketing vice-presidents of major oil companies who were guests expressed in turn their interest in the workings of the committee and its various sub-groups and strongly complimented the members on their solid progress. These were B. L. Ray of Esso Standard, Dwight T. Colley of Atlantic, C. J. Guzzo of Gulf, and S. C. Bartlett of Texas.

Watch this door . . .

. . . for a revolutionary new development in residential boilers! You'll be hearing — *and talking* — about it soon!

This is the Hydrolo Model 800 — *already proven in every State — including Alaska! Now available for immediate delivery.*

Mr Hawley
MANUFACTURING CO.
1209 W. Alta Road, Peoria, Illinois

To Edward and Francis Coffey, this is one of their favorite sights—watching their trainer work out one of their horses.

Solar Heat Dealers Trot Ahead of Competition

EDWARD and FRANCIS COFFEY have been Gulf dealers in Albion, New York, for 27 years. They also are partners in a trotting stable, with five horses in their string.

"We like to work together and have fun together, too," says Edward. "And selling Gulf Solar Heat gives us the chance to do both."

"Service calls have never been a serious problem for us," adds Francis. "We've been able to use a lot of the time saved to spend with the horses. And with new Gulf Solar Heat, our business is bigger and service problems fewer today than ever before."

Of course customers of Coffey Brothers, Inc. are satisfied with Gulf Solar Heat. It burns cleaner because it's hydrogen-purified.

For complete information on the many advantages of being a Gulf Solar Heat brand reseller, phone your nearest Gulf office collect!

Go one better—Go Gulf

GULF
SOLAR HEAT
heating oil

Here is Francis with one of the stars in their stable, money winner in 23 out of 25 races.

Photographs of horses and of their business, too, line the walls of Francis' and Edward's office.

fueloil & oilheat

CHOOSE FROM GENERAL ELECTRIC'S LINE

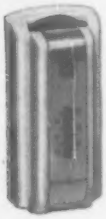
THERMOSTATS

. . . your choice of three distinctive, smartly styled new *Straight-Line* thermostats or the familiar "K" thermostat, all designed around G.E.'s proved, dependable mechanism.

3AHT20 Low voltage (24 volt) 2 wire heating service, 55 to 85 F. Variable heat anticipator 0.2 through 0.8 amps. SPST. Snap action mechanism. Adjustable temperature differential. Large, easy-to-read thermometer dial.

3ACT20 Low voltage (24 volt 2 amp max) cooling service, 55 to 85 F. Same smart design as heating model. Fixed cooling anticipation. SPST. Makes contact on temperature rise.

3AAT30 Low voltage (24 volt—2 amp max) heating-cooling thermostat with sub base. Manual or automatic control of fan. Standard SPDT contacts. Variable heat anticipator. 0.2 through 0.8 amps. HEAT-OFF-COOL selector switch. Fixed cooling anticipation.



K1AN200 Low voltage (24 volt) heating service, 55 to 85 F. Variable heat anticipator 0.2 through 0.8 amps. Adjustable temperature differential. Standard neutral grey cover, aluminum strap with liquid thermometer.

OUTDOOR CONTROL SYSTEM

Designed to work with either the new straight-line or the K thermostat, this G-E outdoor-indoor control system provides an economical means of compensating for loss of heat through outside walls during cold winter weather.

Outdoor thermostat Low voltage (24 volt) reacts to outdoor temperature before winter cold penetrates walls to cause discomfort.

24-volt transformer Provides current for system economically, safely. Installs handily on any standard conduit box.

MASTER CONTROLS

These General Electric master controls are safety controls, designed to operate the oil burner and help protect the system. Like all G.E. controls, they're easy to service and install. Features: constant or intermittent ignition. Locks out on ignition failure. Recycles on flame failure during normal heat run. Positive safety timing.

Stack-mounting, 90 second lock out	
curved flange, welded helix, 115 v, intermittent ignition	CR7865A101A2
curved flange, welded helix, 115 v, continuous ignition	A101B2
curved flange, welded helix, 115 v, continuous ignition, line voltage	A101L2
curved flange, welded helix, 230 v, intermittent ignition	A101A3
curved flange, welded helix, 230 v, continuous ignition	A101B3
curved flange, bolted helix, 115 v, intermittent ignition, high temp. bimetal	A101C2
curved flange, bolted helix, 115 v, continuous ignition, high temp. bimetal	A101D2
curved flange, bolted helix, 230 v, intermittent ignition, high temp. bimetal	A101C3
curved flange, bolted helix, 230 v, continuous ignition, high temp. bimetal	A101D3
flat flange, welded helix, 115 v, intermittent ignition	A101H2
flat flange, welded helix, 115 v, continuous ignition	A101J2
flat flange, welded helix, 230 v, intermittent ignition	A101H3
flat flange, welded helix, 230 v, continuous ignition	A101J3
Remote-mounting, 25 second lock out (for use with 3AHD2 Flame Detector)	
intermittent ignition, 115 v	A105A2
intermittent ignition, 230 v	A105A3
continuous ignition, 115 v	A105B2
continuous ignition, 230 v	A105B3
Remote-mounting, 45 second lock out (for use with 3AHD2 or D4 Flame Detector)	
intermittent ignition, 115 v	A105E2
intermittent ignition, 230 v	A105F3
continuous ignition, 115 v	A105F2
continuous ignition, 230 v	A105F3

FOR MORE INFORMATION, CALL YOUR G-E HEATING CONTROLS DISTRIBUTOR

Section 740-135, General Electric Company, Schenectady 5, New York

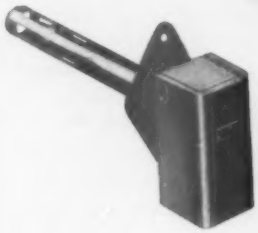
OF SIMPLE, EASY TO INSTALL CONTROLS

FLAME DETECTORS

Highly sensitive, accurate detector units designed to give dependable operation and protection with General Electric remote mounted master controls. Features: stack or combustion chamber mounting flexibility. Fast acting quartz rod element. Clutch action provides immediate reaction to temperature change.

Nomenclature	
3AHD2A2	Without shield, length 7 19/32 inches
3AHD2B2	Without shield, length 11 19/32 inches
3AHD2C2	Without shield, length 19 19/32 inches
3AHD2D2	With shield, length 7 19/32 inches
3AHD4	With bimetal actuated flame detector for stack mounting, 6½" insertion

WARM AIR LIMIT CONTROLS



Available in limit only or fan and limit models. These sturdy controls regulate forced-circulation warm air systems, and protect the furnace from overheating.

Nomenclature	
CR2992-B111A2	Opens on temperature rise (150 F to 350 F) adjustable limit
B111A3	Opens on temperature rise (300 F to 700 F) adjustable limit
B110A2	Fan and limit with summer switch. Adjustable fan, adjustable limit, and adjustable fan differential.

STEAM PRESSURE CONTROLS

Dependable "direct-acting" limit control that prevents pressure from going too high in a domestic steam system, and maintains a certain pressure in the boiler until the thermostat is "satisfied".

Nomenclature	
CR2927-E108A2	Non-adjustable, normally closed, male fitting
E108A3	Non-adjustable, normally closed, female fitting
E108A4	Non-adjustable, normally closed, compression fitting
E108B2	Adjustable, normally open, male fitting
E108B3	Adjustable, normally open, female fitting
E108B4	Adjustable, normally open, compression fitting
E108D2	Adjustable, normally closed, male fitting
E108D3	Adjustable, normally closed, female fitting
E108D4	Adjustable, normally closed, compression fitting

HOT WATER LIMIT CONTROLS

These controls are sensitive to changes in water temperature, and are generally installed directly into the boiler to provide dependable temperature control and system protection. Adjustable 70 through 250 F.

Nomenclature	
CR2992-B109A2	SPST—normal acting open on temperature rise
B109F2	SPST—fast acting open on temperature rise
B109E2	SPDT—normal acting open on temperature rise or closes on temperature rise
B109J2	SPDT—fast acting open on temperature rise or closes on temperature rise
B109D2	SPST—normal acting closes on temperature rise
B109H2	SPST—fast acting closes on temperature rise

TRANSFORMER RELAYS

Here's a combination transformer and relay that operates circulator, blower or fan motors, and burner motors. In addition they can be wired to control a low voltage circuit.

Nomenclature	
CR7865-C100B2	With enclosure, primary 115 volt, 50/60 cycle
C100B3	With enclosure, primary 230 volt, 50/60 cycle
C100B4	With enclosure, primary 115 volt, 25 cycle
C100B5	With enclosure, primary 230 volt, 25 cycle

FAN AND LIMIT SWITCHES

This new G-E control is now being incorporated in the system of many furnace manufacturers. Be sure you replace the AHL5 in any system you service with the exact same model. There's a complete selection of models available to fit any domestic oil or gas furnace, any 24 volt control circuit.

GENERAL ELECTRIC

General Electric launches weather forecast Contest

GENERAL ELECTRIC through its heating control distributors is conducting a nationwide contest, the winners to be the persons who come closest to predicting the correct amount of snowfall at Stampede Pass, Wash. and the temperature at Mt. Washington, N. H.

The company's Appliance Control Dept., Morrison, Ill., is offering a trip for two to Florida as a first prize. There are five additional national cash prizes and the best dealer "weatherman" at each G-E heating control service center will receive a weather barometer. Service centers sponsoring winning dealers will receive duplicate prizes.

To enter a dealer must submit an entry blank obtained from an authorized G-E control center. The entrant forecasts the number of inches of snow to fall at Stampede Pass from December 1, 1959 through January 15, 1960. He forecasts also the lowest temperature that will be recorded at the Mt. Washington observatory N. H., on next January 15.

Penn Boiler & Burner Mfg. renamed Pebbco Industries

PEBBCO INDUSTRIES, INC., is the new corporate name of Penn Boiler and Burner Manufacturing Corp., Lancaster, Pa.

The change is the result of expansion and diversification of lines and products made by the company according to Albert Morrison, Jr., president. Penn Boiler and Burner will become the Penn Boiler Division of the parent company.

Revcor, Inc., will enlarge manufacturing Facilities

A PLANT EXPANSION is underway at Revcor, Inc., Carpentersville, Ill.

Some 28,000 square feet of manufacturing space will be added to their present plant.

Honeywell to begin marketing of Electronic Air Cleaners

MINNEAPOLIS-HONEYWELL Regulator Co., Minneapolis, Minn., will begin marketing electronic air cleaning equipment for the residential market early in 1960.

The company already produces such equipment for commercial use and sees the home market as offering the "largest sales potential since the advent of automatic heating."

Chrysler Airtemp introduces Line, announces 1960 Plans

PAUL M. AUGENSTEIN, Chrysler Airtemp president, outlined the company's 1960 objectives at conferences attended by 500 distributors and company field personnel in two identical meetings covering a four-day period in Dayton, Ohio.

During the meetings 16 new products were unveiled in the 1960 line of residential and commercial heating and airconditioning equipment.

Season's Greetings

MAY THE NEW YEAR BRING

PEACE

GOOD WILL

AND

PROSPERITY

Hago

PRECISION NOZZLES

1120 GLOBE AVENUE

MOUNTAINSIDE, NEW JERSEY

THRUSH CIRCULATORS

Tops in quality for 32 years!

SEALED-IN LUBRICATION

DOUBLE SEALS

TIME-TESTED COUPLING

ADJUSTABLE BRACKET

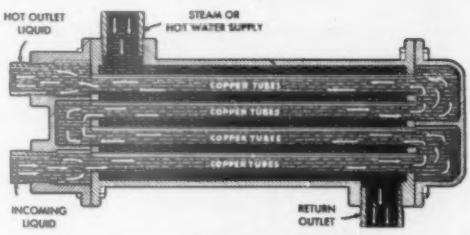
AUTOMATIC OVERLOAD PROTECTION

TWO-BOLT FLANGES

THRUSH WATER CIRCULATOR HORIZONTAL OR VERTICAL

THRUSH HEAT EXCHANGERS

Thrush Heat Exchangers are used not only for heating domestic hot water but for many other industrial applications such as heating water for dishwashing machines, fuel oil preheating, etc. Designed to give greater heat exchange efficiency.



4-WAY WATER PASSAGE

Free circulation in the shell and header reduces frictional resistance and pressure drop. Straight copper tubes make cleaning easy. No acids or chemicals. Ideal for steam or hot water.

Forced Circulation

INCREASES EFFICIENCY AND REDUCES PIPING COSTS . . .

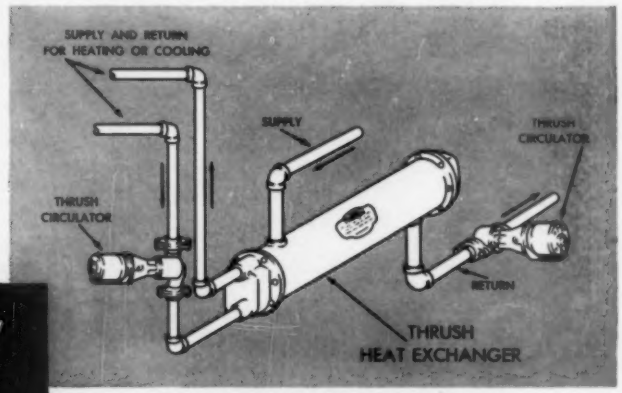
THRUSH Water Circulators are soundly engineered and have been constantly improved to assure better hot water heating at lower cost. They are made in seven sizes, both horizontal and vertical types. Hi-head Thrush Water Circulators are available in four sizes.

You can fit the Circulator to the job, be sure of the highest heating efficiency, and keep your price in line. You know you are giving your customers the best when you install a Thrush Water Circulator.

See your wholesaler or write Department C-12

Quality Hydronic Heating Specialties

H. A. THRUSH & COMPANY
PERU, INDIANA



Typical application of Thrush Heat Exchanger

Controls Company of America makes key personnel Changes

THREE KEY personnel changes affecting the handling of sales and engineering have been made in the Heating and Airconditioning Controls Division, Controls Company of America, Milwaukee, Wis.

R. W. Sloane has been promoted to director of engineering-heating and airconditioning controls. Replacing Sloane as product manager-oilheating products is R. E. Law, who had been sales manager of Breese Burners, Inc., which was acquired by Controls Co. in 1958.

Harvey B. Wilgus has been transferred to the Division as assistant director of sales.

Petrometer issues Handbook on its Line of Instruments

A POCKET-SIZED Handbook of Hydrostatic Instruments, prepared by Petrometer Corp., Long Island City 1, N. Y., contains specifications and descriptions of the company's line of liquid level measuring gauges, specific gravity indicators, plus pertinent engineering data.

Prepared for engineers and others who specify, purchase or install such instruments, the handbook opens with an explanation of the principles of hydrostatic measurements, selection and installation of instruments, design and construction of panel systems, augmented by useful engineering data and diagrams.

The data in the handbook include a complete section devoted to the Petrometer hydrostatic system for the measurement of liquid depth or volume in storage tanks. This is followed by detailed descriptions of gauges and accessories offered for this purpose, including Series 1329 fueloil indicators.

Big Job Hercos with electronic controls.

For Commercial and Industrial. 5 to 20 gph.

New M-H R-890E electronic controls.
Burn No. 2 oil.
Simplified, easy servicing.
Competitively priced.
Low maintenance.
Individually fire tested and guaranteed.
Famous Herco Quality in design, materials, workmanship.
Field tested, proved in US* and abroad.

* Widely used in US Government Buildings as well as private industry.

Loosen 3 screws; entire ignition assembly lifts out. Model GS-3 (5-10 gph) illus. Similar Model P-50 (8-20 gph).

OIL THRIFTY HERCO

A complete line of Heating Equipment for every type, size Job. Free catalogs.

HERCO OIL BURNER CORPORATION, LANCASTER, PA., U.S.A.

Jet-Heet, Inc., names Barr sales Manager; joins OHI

ROBER M. BARR has been appointed national sales manager, Jet-Heet, Inc., Englewood, N. J. He formerly was executive secretary of the Oil Heat Institute of Long Island from the time of its inception, 4½ years ago.

The company recently was approved for membership in the Manufacturer Division of Oil-Heat Institute of America, Inc.

Calvin D. MacCracken is president of the firm that makes forced warm air furnaces with prefabricated flexible ducts and Jet-Cool airconditioners.

Sales Representatives named by Pacific Steel Boiler Div.

APPOINTMENTS of sales representatives in five areas have been made by the Pacific Steel Boiler Division, National-U. W. Radiator Corp., Johnstown, Pa.

The new representatives are O. M. Jones Co., Johnson City, Tenn.; R. P. Fedder, Rochester, N. Y.; Wilson-Brinker Associates, Inc., Kalamazoo, Mich.; Heet-Flo Co., Los Angeles; and Mason & Barry, Charleston, W. Va.

Constant ignition type. UL approved. Interchangeable with other makes in the field.

New W-R CONTROL CIRCUIT stops costly call-backs caused by unnecessary oil burner safety-switch lock-outs

White-Rodgers new 611-1 Oil Burner Control does away with expensive call-backs before they start. Its advanced new circuit eliminates practically all hard-to-check safety-switch lock-outs caused by short cycling or slow heat build-up in the stack . . . materially shortens testing time during installation, too.

Turn call-back losses into profit . . . see your White-Rodgers supplier for complete details on the new "serviceman-designed" 611-1 Oil Burner Control.

White-Rodgers "On-Target" Advertising goes regularly to
Architects • *Builders* • *Contractors* • *Home Owners*

WR

WHITE-RODGERS

CONTROLS FOR HEATING • AIR CONDITIONING • REFRIGERATION • APPLIANCES

ST. LOUIS 6, MISSOURI TORONTO 8, CANADA

fuel oil & oil heat

Minneapolis-Honeywell names commercial sales Officials

R. E. HALL has been named Midwest region commercial sales manager for Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. He will direct Commercial Division activities in a 10-state area.

He succeeds D. K. Ridley who has been transferred to Philadelphia where he will direct contract operations in the industrial instrumentation field. Joe Teskoski is Hall's successor as branch commercial sales manager at the company's Chicago office.

New Division will consolidate Coleman's European Operation

COLEMAN-EUROPE, a new division of Coleman Co., Inc., Wichita, Kan., will begin operations about January 1 with R. B. Spiro as director general He will resign as vice-president, but will remain a director of Coleman Lamp and Stove Co., Ltd., Toronto

All manufacturing, distributing and administrative operations in Europe will be centered in the new division.

Cecil F. Terrell will take charge of all business activities of the Coleman companies outside of the United States, Canada and Europe. Export offices of the company will remain in Toronto.

Harsch Nozzles covered in new catalog Sheets

OILBURNER NOZZLES made by H. Harsch & Co. are the subject of new literature and catalog sheets available from the company. The catalog sheet, designed to fit any type of catalog binder, illustrates the nozzle and lists prices and spray angles available.

A smaller folder describes the nozzles features more thoroughly, includes a capacity chart and pictures service and nozzle kits which are offered.

Howard Harsch, who purchased the company earlier this year, points to a 25% increase in business this year which he views as a result of the company's increased sales activity. H. Harsch & Co., located in Maplewood, N. J., has been a familiar name in the nozzle field for the past 26 years.

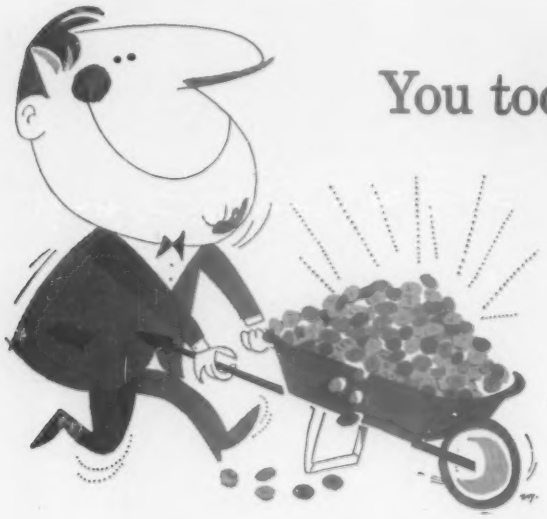
Gulf Oil develops combined Degree-day-Receivables Plan

GULF OIL has developed for its Solar Heat dealers a combined degree-day-accounts receivable plan.

Basically the plan consists of filing with the special degree-day record form maintained for automatic delivery the same invoice from which delivery information is recorded. Thus, the degree-day file becomes also the official accounts receivable record and removal of the invoice when paid completes the accounts receivable transaction. The same record card used for degree-day information is used also for credit and collection data.

The plan eliminates monthly statements and uses the degree-day records, which must be maintained in any event for delivery purposes, in place of all other accounting records. Basic parts of the plan are a special combination meter ticket-self-mailer invoice and a special degree-day folder.

(*Please turn to page* 90)



You too can make more money!

You can build your business into a real money-maker with a Sinclair heating oil franchise. Here are four good reasons why:

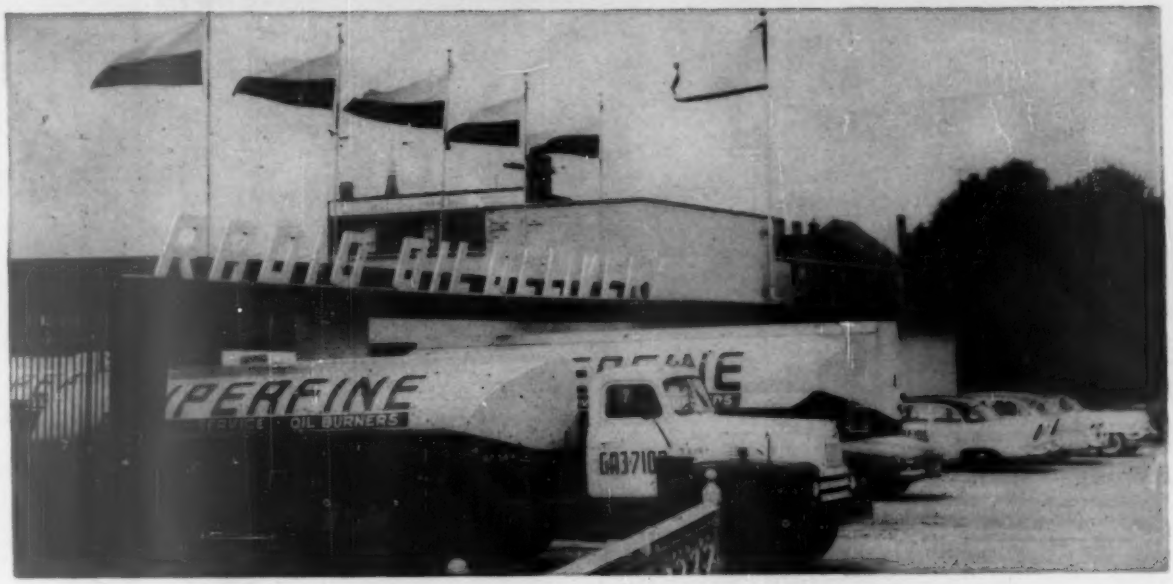
- You can offer premium quality products at regular prices. Sinclair Heating Oil contains an exclusive anti-rust ingredient. Result: reduced service calls.
- A strong advertising program — designed to be used at the local level — *where it counts most!*
- A special sales training program — full of profitable new ideas.
- An assured product supply — thanks to Sinclair's huge production and ample storage facilities.

There's much more in the market for you with Sinclair Heating Oil. For details, write: Sinclair Refining Company, 600 Fifth Avenue, New York 20, N. Y.

Sinclair
HEATING OIL

SINCLAIR HEATING OIL
SuperFlame

SUPERFINE FUELS COMPANY CUTS COSTS— INCREASES CAPACITY WITH MARLOW®



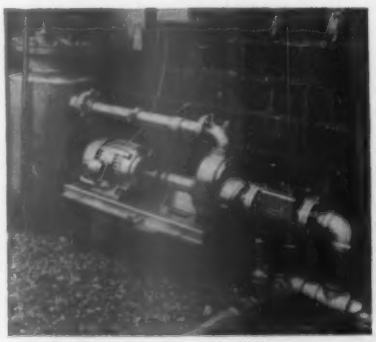
Two New Pumps Replace Five Positive Displacement Units

The Superfine Fuels Company of Philadelphia, Pennsylvania, is one of the largest home fuel oil retailers in the area. Owned by Joseph Goldenburg, the firm operates 36 trucks from its bulk plant at Lawrence St. & Erie Ave.

The plant is equipped with an underground capacity of 160,000 gallons of #2 fuel oil. Until recently, five positive displacement pumps, totalling less than 750 gallons-per-minute capacity, served the loading racks. Two new Marlow Pumps, having a total capacity of 950 gpm, replaced these old units. The new Marlows, a 425EL and a 32 HELP-13, using less than *half the horsepower* than the old pumps, *increased loading capacity almost 27%!*

The performance of the Marlow bulk plant pumps was so excellent that Mr. Goldenburg is presently converting his truck fleet from rotary type to Marlow Self-Priming Pumps. He expects that the change-over will enable him to increase the number of stops per truck.

If you have a problem of improving plant efficiency and cutting operating expenses, look to Marlow for help. Marlow builds a complete line of petroleum handling pumps for bulk plants, home delivery trucks and transports. See your Marlow dealer today for details or write direct for Bulletin PM06.



Replacing positive displacement pumps, this single Marlow 32 HELP-13 uses less horsepower than old units yet increases capacity from 300 to 350 gpm.

8-314

This Marlow 425EL self-primer installed at Superfine Fuels Company pumps from underground tanks at 600 gpm to speed truck filling.

Marlow PUMPS®

MARLOW PUMPS®
DIVISION OF BELL & GOSSETT CO.
Midland Park, New Jersey
Morton Grove, Illinois • Longview, Texas

this WALKER Automatic DRAFT REGULATORS Unit...
ENDS DRAFT PROBLEMS
in gas, oil and solid-fuel installations*

THE INSIDE STORY OF SHUR-FLO EFFICIENCY
- Hi-Volume Self-Feathering Fan
- Self-Cleaning Blades (No Soot Build-up)
- Stainless Steel Shaft, Hub and Blades
- Quiet, Burn-Out Proof Motor
- Silicone Oiled Bearings
- Extra Rigid Mountings
- Extra Heavy Gauge Galv. Steel Construction.

"I don't fret with uncertain draft since Walker brought out this low-priced inducer-regulator. Now I install Walker inducers on all my jobs and have good draft right from the start!"

"Most Efficient Draft System Ever Made"
Say Heating Contractors, Architects, Home Owners

Draft problems end with Walker Shur-Flo (Pats. Pend.), SUREST DRAFT SYSTEM ever devised for oil, coal or gas-fired installations from older homes to modern, low-roofed houses. Install it, forget it! What could be better?

*Free! "HOW TO CURE SICK CHIMNEYS"

Now, the *first* ready-reference guide collecting *all* the information on Power Inducer Venting you'll need to solve your draft problems. You'll find it indispensable! Get your handy copy now! Absolutely no obligation.
WRITE TO US AT ADDRESS BELOW

Fan-operated draft-inducer draws *only* flue gases—*not* outside air. Quiet. Costs less to operate. Needs little power. Installs quickly at *any* angle. Virtually eliminates costly callbacks and corrections.

There's a Walker Draft Control for every draft problem regardless of fuel. 29,000,000 in use! The industry's standard of performance.

BALANCED 34 for larger special central heating
TYPE BB commercial and industrial control
ROYAL PURPLE for smaller central heating plants
JUNIOR LINE central heating budget control
DOUBLE SWING for gas-fired equipment
VENTURI CAP for heating and ventilating

See your supplier or write direct to
WALKER MFG. & SALES CORP. 1750 Penn St., St. Joseph, Mo.

NEW PRODUCTS

Mercury-round Thermostat shipped with American-Standard Furnaces

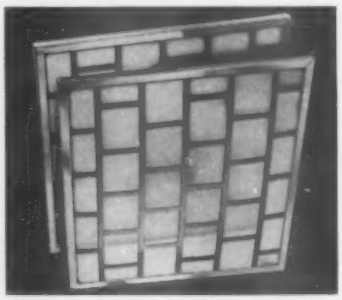
A MERCURY SWITCH thermostat, featuring a concave circular design, has been announced by American-Standard Air Conditioning Div. This Mercury Round thermostat will be shipped as standard equipment on the company's belt-driven warm air furnaces.

Thermostat has a burnished champagne bronze plastic case. Calibration is in 5-degree increments, covering a setting range from 50 to 90°. Known as CA-520, the thermostat has a non-adjustable differential of 1½°F. Mounting for this two-wire, low-voltage thermostat is accomplished with a separate, clear plastic base. Removable cover can be painted.

Made by: American-Standard, Air Conditioning Div., 40 West 40th St., New York 18, N. Y.

Low-cost, permanent, washable Filter is an Addition to the Skuttle Line

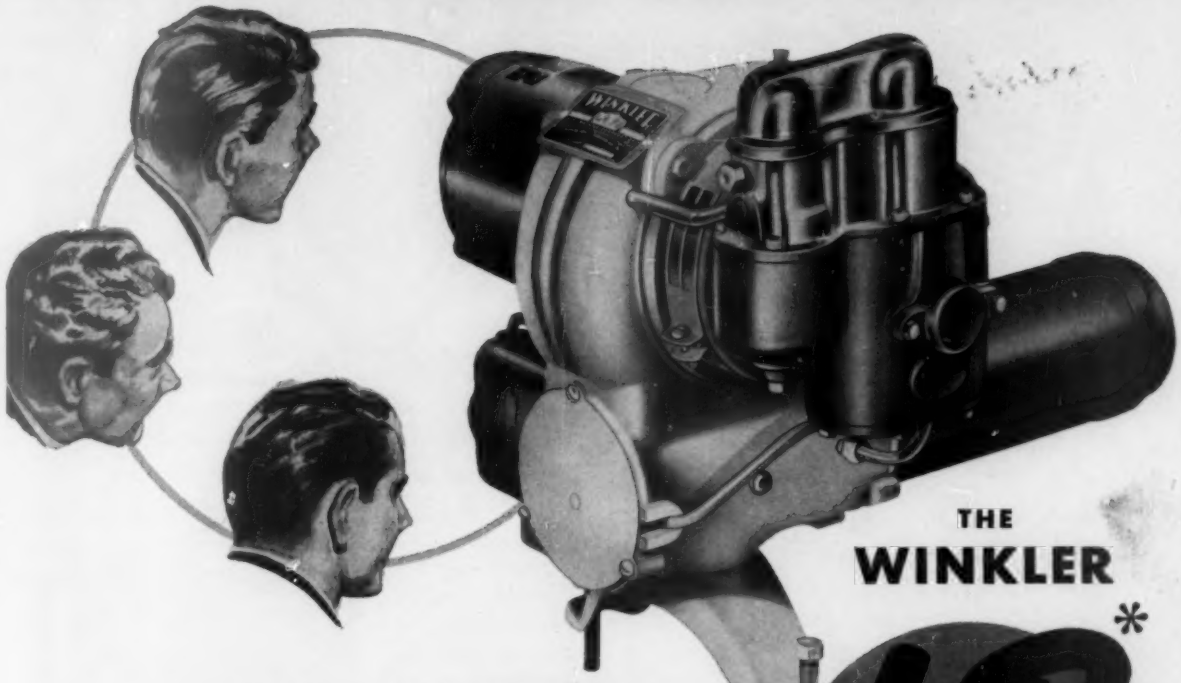
DUST-BAN permanent, washable air filters, announced by Skuttle Mfg. Co., have been designed with the same filtering media and electrostatic action as used in more expensive units. The filter's low cost has been achieved by a new manufacturing method permitting lower cost frame and screen construction. The filter can be rinsed with cold water when the surface load indicates the need for cleaning.



Produced in four standard sizes: 16 x 20 x 1 ins., 16 x 25 x 1 ins., 20 x 20 x 1 ins., 20 x 25 x 1 ins.

Made by: Skuttle Mfg. Co., Milford, Mich.

THE OIL MAN'S BEST FRIEND!



THE
WINKLER
*
LP
*LOW PRESSURE
OIL BURNER

the oil burner with a real sales story... proved to save up to 50%

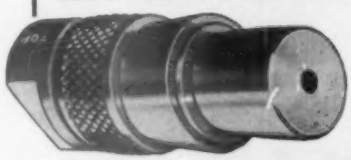
Here's the revolutionary oil burner that gives you a better sales story—and a better profit picture! With the Winkler LP Oil Burner you have something to talk about besides price!

This amazing oil burner has been proved to cut oil consumption up to 50%—pays for itself within a fraction of its long life!

The Winkler LP achieves this economy because its non-clog nozzle and positive action fuel meter permit exact sizing of the burner to the heat requirements of the building...avoids the penalties of frequent cold starts. And with the LP costly service work is virtually eliminated.

Write today for full information on how to obtain a Direct Factory Franchise for the Stewart-Warner-Winkler LP Burner and complete line of furnaces, boilers and cooling equipment.

CLOG PROOF NOZZLE—GUARANTEED 10 YEARS



Won't clog with dirt particles or change capacity with varying oil viscosity.

The Winkler LP Demonstration Unit enables you to prove—*right in your own showroom*—the amazing efficiency of this burner!

Symbol of SW Excellence

STEWART-WARNER

HEATING AND AIR CONDITIONING DIVISION

Dept. H-129, Lebanon, Indiana

The Bethlehem

SAVES money for your customers
MAKES money for you!

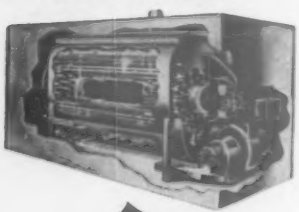
The amazing performance of its WHIRLING FLAME action gives average fuel savings of 40% . . .
Actually pays for itself in five years!
Supplies unlimited hot water 24 hours a day the year round!

4 sizes to accommodate:

- large homes
- apartments
- garages
- greenhouses
- small churches
- motels

Comes in beautiful Duotone baked enamel cabinet. Delivered in one easy-to-install unit, assembled and tested at the factory. Welded steel construction. Built to A.S.M.E. specs.
10 year warranty.

THE EXCLUSIVE
"WHIRLING FLAME"



write or wire for full information:

BETHLEHEM FOUNDRY & MACHINE COMPANY
BETHLEHEM, PENNSYLVANIA, U.S.A.

Scully's new fueloil delivery Nozzle incorporates a fully repairable Swivel

A NEW "COM" NOZZLE for fueloil delivery, announced by Scully Signal Co., has a fully repairable swivel attached.

The nozzle-swivel combination, for use with 1¼" or 1½" hose fittings, weighs 4½ lbs. Outstanding feature is the swivel's two widely separated bearing surfaces, designed to withstand constant use.

Made by: Scully Signal Co., Dept. N, Melrose, Mass.

Dodge introduces complete Series of medium and high-tonnage Trucks

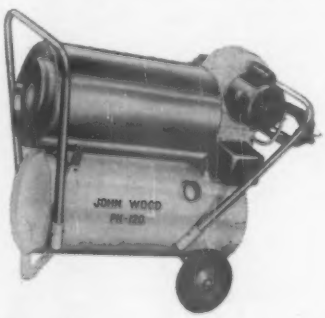
SWING-OUT FENDERS that insure engine accessibility are featured on the 1960 Dodge trucks of medium and high-tonnage size. This new design will appeal to owners who wish to avoid the extra length of conventional models or the extra cost of tilt-cabs. Hinged at the radiator, the swing-out fenders expose headlights, horns, belt drives, wiring, and other components.

The new line includes 140 basic models. Eleven gasoline engines will be available with a horsepower range from 113 to 228. Four diesel engines with a horsepower range from 175 to 220 will be offered.

Made by: Dodge Division, Chrysler Corp., Detroit.

John Wood portable oil Heater for temporary or emergency Use

AN OILFIRED, portable heater introduced by John Wood rolls on large wheels to any area where temporary or emergency heat is required. The unit burns kerosene, Nos. 1 or 2 fueloil or Diesel oil. It weighs 140 lbs., can produce 120,000 Btu/-hr and can be operated continuously for 16 hours. Dimensions are 37" long, 21½" wide and 31" high. The unit's 1/6 hp motor operates on 115 volt, 60 cycle AC current.



Made by: John Wood Co., Heater and Tank Div., Conshohocken, Pa.

Advertising

. . . one of 8 important links to Shell "Certified Comfort" profits

Advertising. A full-scale advertising program has been developed for Shell Fuel Oil distributors to help them familiarize homeowners with the outstanding benefits of "Certified Comfort." It makes use of television, radio, outdoor, newspapers and direct mail. This complete co-op advertising program is available to all Distributors of Shell Heating Oils upon request.

With "Certified Comfort," the Shell Fuel Oil Distributor pledges to provide top-quality heating oil, while assuring his customers of premium service including degree-day system deliveries, anti-corrosion treatments of fuel tanks and metered delivery receipts.

Shell "Certified Comfort" offers fuel oil distributors many outstanding benefits such as:

Distributor Marketing—Shell markets over 90% of its domestic heating oils through distributor organizations.

Permanency—Shell offers various types of long-term distributor contracts which also provide renewal options.

Product Acceptance—Shell has top consumer brand acceptance and is one of the country's largest national advertisers.

Competition—Shell's pricing policy to distributors is fair and competitive.

Research—Shell spends millions of dollars every year on research. Seven Shell research laboratories employ over 2000 technical experts who constantly work to improve and expand the Shell Product line.

Training—Shell conducts local Workshop Conferences in distributor marketing areas. Shell also conducts an oil burner training center at its extensive Sewaren Laboratories in New Jersey.

Insurance—Shell offers its distributors the many benefits of a low-cost group life insurance program . . . up to $10,000.

IT PAYS TO BE A SHELL FUEL OIL DISTRIBUTOR

—and the nearest Shell office will be glad to show you why. Ask for the District Manager.

SHELL

FILTER WATCHER

WHISTLES

WHEN FILTERS NEED CHANGING

$3.95 LIST

THE FILTER SIGNAL THAT NEEDS NO WATCHING

SAVES on FILTERS
Lets you get maximum use from each filter. Eliminates guesswork, tells you when it's time to change . . .

SAVES on FUEL
Dirty filters waste fuel. A clean filter insures full air and heat delivery.

SAVES on CLEANING
A clean filter cleans the air, prevents dust and dirt from recirculating through the heating system.

SAFEGUARDS your FURNACE
A clean filter assures the free flow of air through the furnace . . . prevents dangerous and damaging furnace overheating.

FILTER WATCHER provides both a convenience and a safe-guard that belongs on every forced warm air heating or cooling system.

The Filter Watcher installs on the outside of the furnace jacket between the filters and the blower. As the filter becomes dirty and clogged, the blower sucks air through the Filter Watcher Whistle gradually building up an audible whistling alarm that automatically tells you when it's time to replace the filter.

Send Today for Further Information

VIKING

Viking Instruments, Inc.
EAST HADDAM, CONN.

Thrush develops a zone control Valve for water heating and cooling Systems

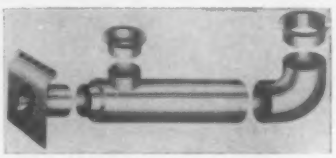
THRUSH's new 1¼" zone valve can be used with water heating and cooling systems. It operates from standard thermostats and relays and can be installed in several different positions. It can be soldered into the line without taking the valve apart and it has a visible wheel for manually opening and closing, if desired; also, features a self-cleaning seat.

In the closed position, the valve stops the flow of water against pressures up to 35 ft. of circulator head pressure. Valves can be made to order to withstand greater pressures.

Made by: H. A. Thrush & Co., Peru, Ind.

Dibert Pressurizer introduces fresh, preheated air to Furnace

THE DIBERT PRESSURIZER is a device designed to take air from outside the house, pass it through a manifold where it is heated before being fed into the cold side of the furnace. A bi-metal control regulates the quantity of air brought into the home. The present model is suitable for installation with blower type furnaces; development work is aimed at designing a model for space heaters.



Made by: Rymco, Inc., 1627 W. Fort St., Detroit 16.

Reliable Equipment and Supply Co. markets humidifier for Furnaces

CONTROLLED humidity of 30% to 45% is given by the new humidifier made by Reliable Equipment and Supply Co. No electricity is needed, a simple connection to the nearest cold water pipe installs the unit to the warm air heating system.

Made by: Reliable Equipment Supply Co., Kenilworth, N. J.

Johnson Air-Ease Hi-boy Furnaces feature two control Combinations

JOHNSON FURNACE'S newly-announced line of Air-Ease Hi-Boy furnaces incorporate a full base which requires no grouting when side filters are used. Filters can be installed on either side and are serviced from the blower compartment.

All models are available with a choice of two control combinations; smaller sizes are available with direct drive or belt drive blowers.

Made by: Johnson Furnace Co., 2129 West 117th St., Cleveland 11, Ohio.

BOOST FUEL OIL DELIVERY by 10%

NEW BUCKEYE NOZZLE...SWIVEL...for low pressure-drop at high capacity

No. 125 FUEL OIL NOZZLE

Available with either 1¼" or 1½" IPT inlet — with or without tube and with or without integral check valve

- Less than 10 lb. drop at 100 gpm.*
- Higher lift, seat diameter larger than outlet tube.
- Designed for 125 gpm flow rate.
- Easy to open, easy to close because of hydraulically balanced design. No hammer or chatter.
- 4-notch replaceable guard permits easy control.

**Tested on nozzle without internal check*

No. 126 SWIVEL. Available in 2 sizes—1¼" and 1½"

- Fully repairable: remove plug and ball bearings. Bearings and quad-ring seal easily replaced.
- Teflon and ball bearings for easy operation.
- Full pipe size opening at both ends. Female portion of swivel (hose end) is larger than hose coupling—easy to attach and detach.
- Increases hose life. Prevents kinks, twists and damaging tension. Allows hose and valve to turn independently.
- Permanent lubrication of bearings; grease-sealed at factory.

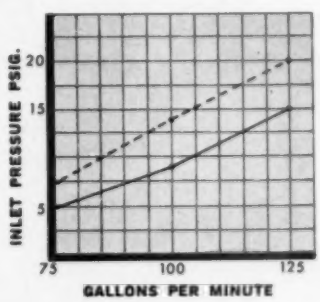
To you, time is money — and increased delivery capacity of your equipment adds to the number of stops your trucks can make per day. This new Buckeye combination is the only such system designed to give you low pressure drop at flow rates up to 125 gpm—virtually an "open pipe" system. Write for more information or contact your Buckeye distributor.

PRESSURE DROP AT INCREASING FLOW CAPACITIES

Typical 1½" fuel oil nozzle*

New No. 125* (1¼" and 1½" sizes—no difference)

**Both less check valve*



Buckeye **BUCKEYE IRON & BRASS WORKS**
Box 883 • Dayton, Ohio

AIR-EASE
TRADE MARK

GAS AND OIL FIRED
COUNTERFLOW
UNITS

DESIGNED
for years of carefree and efficient operation.

BUILT
by experienced furnace men who know the business.

STYLED
for beauty to attract the discriminative home owner.

PRICED
for profits in today's competitive market.

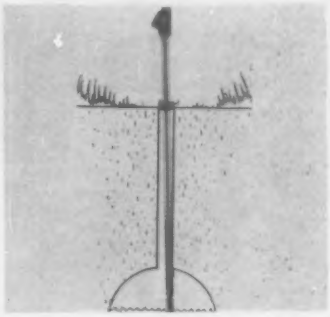
. . . designed, engineered, and built for quiet, comfortable, carefree heating

WRITE FOR
Information and name AIR-EASE *of nearest distributor*
9-12

THE JOHNSON FURNACE COMPANY
2129 WEST 117th STREET, CLEVELAND 11, OHIO

Philly Rapid-Tite has deep Fill for underground tank Deliveries

A DEEP FILL for deliveries to underground tanks, developed by Philly Rapid-Tite, provides supplemental venting and an audible whistle signal. The driver lowers it into the fill pipe, partially raises it until lug engages top of the tank. He rests collar on fill box and tightens a thumb screw. In all-welded aluminum, it weighs less than 4 lbs.; available also in steel.



Made by: Philly Rapid-Tite Div., 5311 Westminster Ave., Philadelphia, Pa.

Siebring Weather Master is portable, oilfired, automatic heating Unit

WEATHER MASTER oilfired, portable heater is compactly designed and mounted on semi-pneumatic wheels and casters. It requires connection to a regular 115 volt outlet and the flick of a switch for operation. A gun-type burner fires into a stainless steel combustion chamber to produce the 200,000 and 300,000 outputs for the two sizes available. An 18-hour capacity fuel tank is included.

Heaters operate on kerosene, No. 1 or No. 2 fueloil, are designed for temporary or emergency applications.

Made by: Siebring Mfg. Co., George, Iowa.

Hex-E-Case, Jr. provides Receptacle for those easy-to-lose Allen Keys

HEX-E-CASE, JR. has been developed by Hartwyk to provide a handy receptable for those easy-to-lose Allen keys. It is a durable metal case, complete with eight Allen keys from .050" to 7/32" across the flats to fit socket head screws from #0 to 7/16 set. The keys won't fall out when the case is turned upside down, yet they are removable with a straight pull-out.

Made by: Hartwyk Mfg. Co., 360 Glenwood Ave., East Orange, N. J.

KING FILL ALARMS

CHOOSE KING FILL ALARMS

with NEW Improved Type "R" Whistles

YOUR BEST BET

With today's accent on higher pumping speeds...faster deliveries, you're miles ahead with KING FILL ALARMS. They have proven superior in thousands of installations from coast to coast.

Here's why:

- Whistle signal is distinct . . . Unfailing...sounds off while tank is filling —stops when oil reading reaches capacity level.
- Comes in three models: 16 sizes—there's a King Fill Alarm for every need.

WRITE FOR DESCRIPTIVE LITERATURE

OIL EQUIPMENT MFG. CORP.
169 DERBY AVE. NEW HAVEN, CONNECTICUT

I give Expert Service and I use . . .

My IDEAL NOZZLE EXTRACTOR

Removes nozzle in seconds!

A special quality tool for oil burner service men, designed and perfected by an oil burner man with years of service experience.

Three wrenches in one compact tool.

Makes nozzle removal easy in practically every type gun assembly.

Eliminates the bending of electrodes and cracking of porcelains caused by the use of ordinary wrenches.

A "must" for good service work!

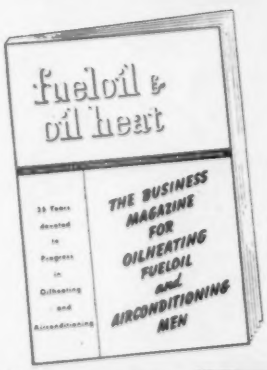
"Saves me valuable time!"

For details, write to:

BOSTON MACHINE WORKS COMPANY
Oil Heating Supplies Div.
7-17 WILLOW STREET
LYNN, MASSACHUSETTS

Readers! Advertisers! Get Ready!

32ND ANNUAL JANUARY STATISTICAL and REVIEW ISSUE



An important Issue of 1960 for YOU. For the last 32 of our 38 years our January Issue has been an unusually useful and penetrating analysis of our Industry's activities during the preceding year. It will report sizes, prices and trends in oilfired boilers, furnaces, conversion burners, air conditioning, and commercial-industrial equipment for 1959. It includes over 30 tables and charts, with an analysis of their significance to retailer-dealer-installers, distributors and manufacturers. Valuable sales data in this issue will include a study of selling activities by dealers; equipment sold; salesmen's compensations; geographical variations all for 1959—and a dealer forecast of sales for 1960.

ADVERTISERS! THIS IS A PARTICULARLY GOOD ISSUE FOR YOUR STORY TO REACH THE TARGET IN THIS $3 BILLION MARKET.

FINAL AD CLOSING—DEC. 14 • FUELOIL & OIL HEAT

2 West 45th St., New York 36, N. Y. • (MUrray Hill 2-4786)
A. G. WINKLER, *Adv. Dir.* **LEE STEEDLE, *Adv. Mgr.***
***Eastern Adv. Mgr.*: DICK RAYMOND**

***Midwest*: Larry Alles, 224 So. Michigan Ave., Room 200, Chicago 4 (WAbash 2-9548)—Pacific Coast: Don Harway, 1709 W. 8th St., Los Angeles 17, Calif. (HUbbard 3-5141).**

ABC AUDITED PAID CIRCULATION · OHI MEMBER · BPA MEMBER

Since July, 1922—37½ years of untiring service to our field.

fueloil & oilheat

Manufacturers' Activities

(*Begins on page 76*)

Stoddard Industries transfers Chicago Office to Wisconsin

CONSOLIDATION of sales and general offices at Cudahy, Wis., has been achieved by Stoddard Industries by moving its Chicago offices to the Cudahy plant.

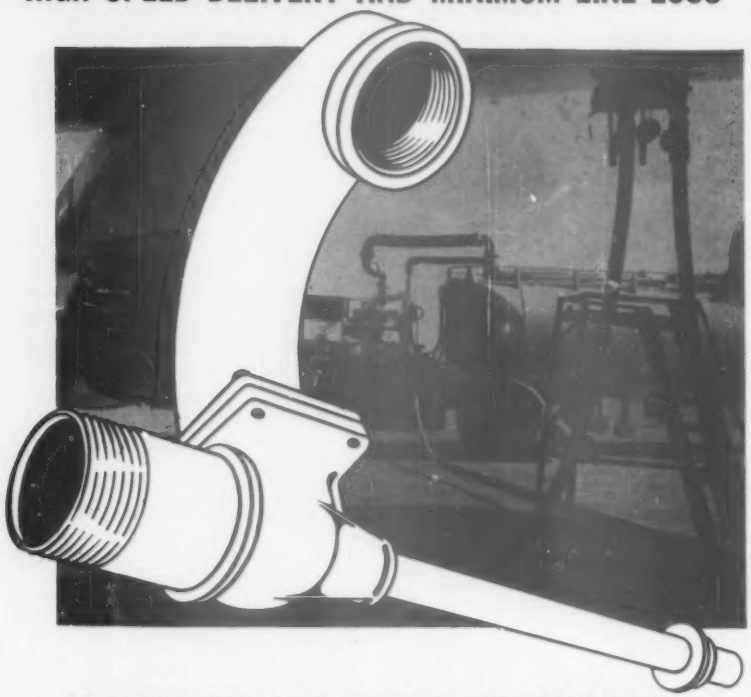
The company makes electrostatic air filters for furnaces and airconditioners and recently opened a new factory in Claredon, Ark.

Emerson Electric expands engineering Activities

ALL ENGINEERING activities in the electrical division will be expanded by Emerson Electric Mfg. Co., St. Louis. Personnel will be increased to intensify research on product development and customer requirements.

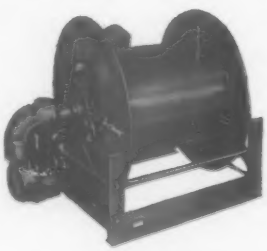
William G. Martin, III, has been named assistant chief engineer to supervise the specifications and drafting groups and the electrical division's engineering laboratory.

HIGH SPEED DELIVERY AND MINIMUM LINE LOSS



WITH NEW HANNAY HI-CAPACITY HUB ASSEMBLY

To meet the Jet Age demand for hose reels to provide delivery speeds up to 600 gpm, Hannay has engineered this completely new Hi-capacity hub. The unique hub design and the long sweep of the hose connection provide unrestricted flow characteristics unmatched by any reel in the industry.



For more information on Hannay reels with the new Hi-capacity hub and other Hannay developments for High Speed Fuel Delivery, call your Oil Equipment Jobber, or write direct for complete information.

Hose Reels by HANNAY

CLIFFORD B. HANNAY & SON, INC., WESTERLO, NEW YORK

Symbol adopted by Minneapolis-Honeywell to mark 1960 as the 75th anniversary of automatic heat. The company has planned an all-industry celebration throughout the year to interest all segments of the industry, including manufacturers, distributors and dealers, along with trade associations, and spotlight heating and airconditioning.

Better Heating-Cooling Council plans annual Meeting, Dec. 8

THE NATIONAL Better Heating-Cooling Council will hold its annual meeting December 8-10 at the Sheraton-East Hotel, New York City.

The 1960 program will be mapped out at this time. A workshop session for advertising and sales promotion executives of member companies will be held. This will include a demonstration on the use of BHC sales tools and special promotions, showing how they can be applied to company products to produce bigger sales.

Among the speakers will be Irvin L. Rechkemmer, president, NAPC.

Granberg Corp. is acquired by American Meter Company

AMERICAN METER CO., Philadelphia, recently purchased the Granberg Corp., Oakland, Calif. Announcement of the sale was made jointly by Albert J. Granberg, founder of the Oakland firm, and William G. Hamilton, Jr., president, American Meter.

Russell W. Wetjen has been named vice-president and general manager of the Granberg operation which will be operated as a subsidiary company. He will be assisted by Robert C. Anderson who will continue as vice-president in charge of operations.

TWO NEW OIL FURNACES

NEW! UPFLOW MODEL U-OB

60" low x 20"-27" wide x 32½" deep

4 sizes: 84,000–95,000–112,000–140,000 Btuh

This brand-new oil-fired winter air conditioner is shipped completely factory-assembled and wired, with burner installed. Burner and controls are completely enclosed in an attractive cabinet that's so compact you can install it almost anywhere—basement, utility room, game room, hallway, alcove.

The small size is made possible by a new-type sectional heat exchanger that gives more heating surface in less space, extracts maximum heat—and gives *you* a strong fuel-economy sales story. Both the primary control—with flame-sensing device in the burner blast tube—and the fan-and-limit control are factory-connected to a single Central Control Station.

NEW! COUNTERFLOW MODEL CF-OB

65" low x 20"-24" wide x 32½" deep

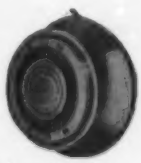
3 sizes: 84,000–95,000–112,000 Btuh

Here is the best-engineered counterflow unit made today.

For example, a new-type sectional heat exchanger provides maximum radiation surface in minimum space. The new Central Control Station handles *every* operation of the furnace automatically. The new primary safety control is factory-mounted right in the burner blast tube.

"MERCURY-ROUND" THERMOSTAT

Here's big news! This DeLuxe mercury-activated Thermostat is standard equipment on all belt drive furnaces *at no extra cost*. As efficient as it is attractive, it anticipates heat requirements—eliminates costly over-heating, and ends that chilly feeling so common before the furnace goes on.



Both the U-OB and the CF-OB are equipped with the proven American-Standard "ACD" burner, which has earned a reputation among dealers as "the most reliable burner on the market." These two units are *all* you need to handle 95% of your oil-fired installations—basement, utility or counterflow. (If you need larger capacity, a two-furnace installation has definite advantages.) Units convert easily to gas . . . cooling is easily added. Get the spec sheets and the low competitive prices at your American-Standard distributor today.

AMERICAN-Standard

AIR CONDITIONING DIVISION

Elyria, Ohio

fuel oil & oil heat

Names in the News

(Begins on page 16)

William H. Miller has been appointed general manager of sales, Standard Oil Co. (Ind.) and has also been elected a director of the company. He replaces Alton C. Sailstad who recently resigned.

Miller has been with Standard Oil since 1929. He became assistant general manager for sales promotion in 1947 and was named assistant general manager for reseller operations in 1950, for sales promotion and advertising in 1954, and for marketing in 1957.

J. K. Lund has been named vice-president, Research and Development Division, The Dole Valve Co., Morton Grove, Ill. He was formerly vice-president and director of technical services. He joined Dole in 1927 as production engineer.

R. A. Gonzalez has been promoted to the newly-created position of manager, industrial sales, Packaged Heating and Cooling Department, Chrysler Airtemp, Dayton, O. He began his career in 1925 with York Ice Machine Corp. and joined Airtemp in 1936 as an engineering supervisor. Most recently he has been application engineering manager for Airtemp's National Service Department.

Colin Holmes has been named president and general manager, D. H. McCorkle Co., Inc., Berkeley, Calif. He was formerly vice president and

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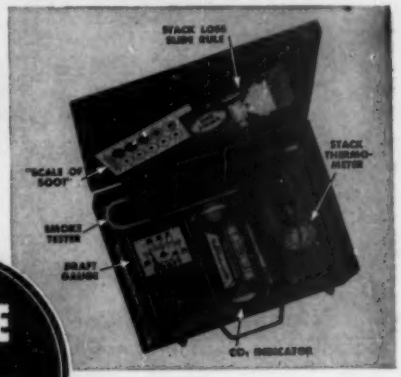

FYRITE UTILITY KIT ... PACEMAKER FOR PROFITS from Expert Tune-up Service

Making the most of your ability to do an expert tune-up job will pay you big dividends in gaining you competitive leadership and neighborhood recognition of your competence as a heating expert. The combustion-testing kit shown here contains precision-made quality instruments with which you can make fullest use of your know-how in making a fuel conservation survey, checking a burner for wornout parts and needed repairs, or running an efficiency test to close a replacement deal.

The kit contains the well-known FYRITE CO_2 Indicator, the versatile MZF Draft Gauge, the all-metal TEMPOINT Stack Thermometer and the sensationally new TRUE-SPOT Smoke Tester. Now, for the first time, you can adjust an oil burner quickly and expertly for highest CO_2 without objectionable smoke . . . do away with guesswork, and "hit and miss" fumbling in adjusting for clean firing. The "Scale of Soot" which comes with the TRUE-SPOT tells you the limits of permissible smoke for various burners and types of heating systems. This amazingly simple method of oil burner adjustment is the greatest advance in combustion testing since the introduction of the FYRITE. You will be proud to be among the first to own this "up-to-the-minute" combustion-testing kit.

For complete information on this and other new tune-up equipment—write for Bulletin 777

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general manager, Kresky Manufacturing Co., Petaluma, Calif. The McCorkle Co., founded 25 years ago, plans to expand its production and line of heating controls.

Howard Krueger has been appointed district sales manager for Michigan by Heil-Quaker Corp., Nashville, Tenn. Previously, he had been a salesman for a wholesale house and a licensed heating contractor in Detroit.

John A. Green has been named general sales manager, Viking Air Products, Division of National-U. S. Radiator Corp. He succeeds *Dick Gang* who has joined Brothers Co., Cleveland. Green joined Viking's sales promotion department in 1946 became a sales representative and then in 1953 became sales manager of distributor sales.

Thomas P. Conlan has been named sales representative, Hartol Petroleum Corp., with headquarters at Hartol's offices in Revere, Mass.

H. M. Carnahan and *George S. Myers* have been named vice-presidents of Penn Controls, Inc., Goshen, Ind. As director of sales, Carnahan will be responsible for both domestic and foreign marketing. He has been in the heating and airconditioning industry for 22 years, most of this time with American-Standard's Sunbeam Division. Myers now vice-president, director of manufacturing, joined the company in 1954; previously he had been with the Perfect Circle Corp.

Don Hadden, well-known in the fueloil industry and formerly sales engineer with Roper Hydraulics, Inc., Commerce, Ga., has opened his own liquid handling equipment jobbing organization. The company is known as Hadden Pump & Equipment, Inc., Rockford, Ill.

Robert C. Crombie has been added to the sales department, The Johnson Furnace Co., Cleveland. He will be traveling out of Rochester, N. Y., where he was formerly associated with the Flower City Furnace Co.

Building Research Conference

(*Begins on page 59*)

should be offset by a growth in winter use. Electric heat is a fine way to accomplish this.

Faust said that more than 100 electric utilities now have developed rate structures for electric heat. Also he described some of the advantages attributed to electric heating, such as, lower initial cost, room by room control, minimum of service problems. He conceded that there could be moisture and odor problems in a tightly-sealed house, but countered that these are readily corrected with circulating or ventilating equipment.

He concluded that in general installation of electric resistance heating for residences will depend upon the relationship of electric costs to other fuels, the amortization of initial costs, service costs and the severity of the climate.

A considerable portion of Faust's talk was devoted to heat pumps, an explanation of their operation and an evaluation of their application both

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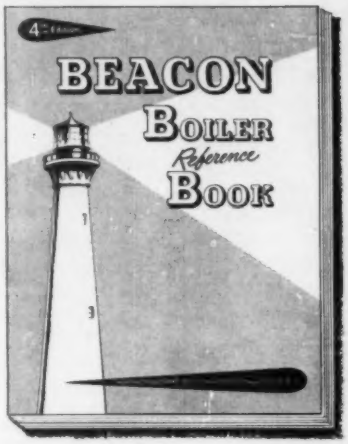

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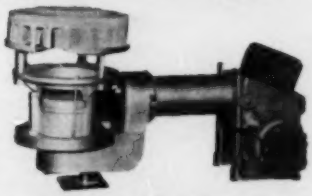

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Solar Heating discussed

Concluding speaker was R. C. Jordan, University of Minnesota, who discussed "The Future of solar heating Systems." He opened with a description of development work in solar heat and showed a number of experimental systems now under study. His conclusions follow:

"Although solar energy is abundantly available and free for the taking, comparatively large capital expenditures are required for the solar collection and heat storage equipment necessary for solar space heating. The incorporation of large, flat, solar collecting surfaces partially dictates the architectural design of a structure. If mass adaptation of solar heating is to be applied to residences it will require control of lot sizes, orientation, and the height of houses and the surrounding structures.

"One of the most promising possibilities appears to be the partial or total use of solar energy as a heat source for heat pump systems. In such systems, smaller solar collecting areas and storage systems are required and the heat pump may also be used for space cooling during the summer.

"At the present time, solar collectors for space heating cost $2 to $3 per square foot of surface area. By design improvement and mass production it appears possible that this cost may be reduced to approximately $1 per square foot. The best economic criterion is the amount of heat collected per dollar cost of collector and this index may be improved not only by reducing the cost of the collector but also by increasing the efficiency of collection. Promising areas of research for increasing the efficiency appear to be through reduction of the energy reflected at high angles of incidence, by the utilization of selectively absorbing and reradiating surfaces and by the use of secondary reflector systems.

"Solar energy storage is necessary because of the extreme variability of the energy source. Since it is uneconomical to store all of the energy needed between periods of available radiation, it is more economical to use an auxiliary heating system to supply heat for the relatively few cloudy periods of long duration. Solar energy is normally stored by utilizing the sensible heat of the storage medium over a relatively narrow range of temperatures or by using the latent heat during a phase change. Materials commonly used are water, rock, gravel or sodium phosphate dodecahydrate. Future solar storage developments may involve energy storage in forms other than heat. Thus storage through electrical, inertial, gas compression, chemical reaction, or biological systems, or by the use of closed-cycle fuel cells are possibilities.

"Several current solar space heating systems have been discussed together with the limited results available up to this time. It is the consensus of those involved that there is ample reason to expect that with mass production of components and with further technical developments, solar space heating systems will be at least competitive with conventional systems."

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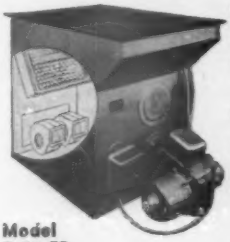

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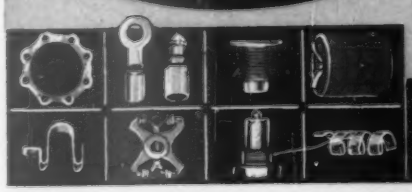

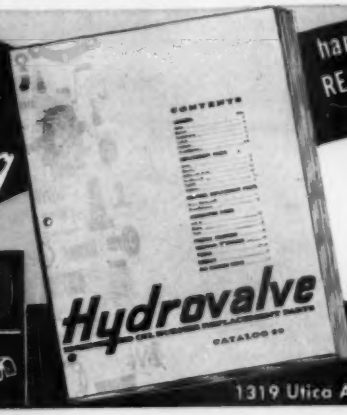

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Index to Articles in 1959 Issues of FUELOIL & OIL HEAT

by months and page numbers

MANAGEMENT *(Oilheating and Airconditioning)*

A GROUP EFFORT PAYS OFF ..... *V. M. Douglas*..Aug. 53
BALTIMORE BUILDERS DISCUSS FUELS... *Tom Carson*..Aug. 66
BOSTON RAISES QUARTER MILLION .. *Thomas J. Scott*..May 64
COINSURANCE CAN BREAK YOU .. *George A. Strader*..Dec. 61
CRAFTSMEN IN THE MAKING .....July 58
DEALER SPEECH FOR CENTENNIAL ACTIVITIES .....July 61
DIAL HATHAWAY FOR WEATHER ... *William J. Stein* Dec. 50
DUNWOODY INSTITUTE RUNS SERVICE SCHOOLS .....Nov. 78
EFFECTIVE BURNER SERVICE ..... *Bert Dunphy*..May 71
FUELOIL SALES VIA BURNER KNOW-HOW
John W. Schulz..Nov. 64
GSA EVALUATES AIRCONDITIONING INFLUENCE
ON PRODUCTION .....Nov. 79
GAS HEAT PROMOTION IS BIG FIGURES .....Sept. 79
GREEN PASTURES FOR OILHEATING .. *V. M. Douglas*..Apr. 58
GROWING WITH CHICAGO FOR 125 YEARS .....Oct. 56
HOW AND WHY WE SERVICE BURNERS .. *Bill Allman*..July 56
HOW SUCCESSFUL ARE YOU? ..... *Paul J. Spiewak*..Aug. 57
IMPERIAL OIL'S SECOND MORTGAGE PLAN
V. M. Douglas..Dec. 57
KEEPING IN TOUCH ..... *William F. Briggs, Jr.*..Sept. 84
MASSACHUSETTS SHOWS HOW! ..... *Robert Gray*..Mar. 71
MODERNIZATION CASE HISTORIES .. *William J. Stein*
BUCKLEY & SCOTT .....Apr. 62
CHAPIN-NICHOLS .....July 54
J. E. KUNKLE .....June 56
MORTON OIL CO. .....Feb. 58
MURPHY FUEL CO. .....Mar. 56
NFC HAS PROMOTION IN 51 MARKETS .....Sept. 70
NORTHWEST EQUALIZES EQUIPMENT COST .....Dec. 52
NOW IT'S ON THE BAG .....Oct. 65
OILHEATING BOLSTERED BY CAMPAIGNS .....Oct. 71
OIL AND WATER CAN MIX ..... *William J. Stein*..Oct. 51
OIL HEAT PARADE IS A NATURAL FOR CENTENNIAL ..Aug. 67
OIL HEAT PROMOTION AND YOUR FUTURE
C. M. Blickensderfer..Sept. 74
'ONE-WORLD' ORGANIZATION OK'D .. *L. S. Marshman*..Dec. 47
PACIFIC NORTHWEST PROGRAM BUDGET .....Aug. 70
PACIFIC NORTHWEST SPEAKS UP
PART I .....Feb. 51
PART II .....Mar. 62
PART III .....Apr. 52
PART IV .....May 57
SERVICEMEN ON THE FIRING LINE.. *Burton H. Mason*..May 68
STANDARD (IND.) ANNOUNCES BURNER SERVICE .....Aug. 64
STREAMLINE THE SYSTEM ..... *Paul J. Spiewak*..Apr. 46
STUDY OF SERVICE CONTRACTS .....May 60
THE DEALERS MANAGE .....June 50
THE NATIONAL FUELOIL COUNCIL .....Mar. 53
WE MUST CREATE THE MARKET ..... *James E. Dyer*..Jan. 68
UPGRADING THE EVIDENCE ..... *M. J. Reed*..Nov. 60
WHAT'S THE RIGHT TRUCK FOR YOU?
Matt E. Nuttila
PART IV .....Jan. 65
PART V .....Feb. 55
PART VI .....Mar. 68
YOU DON'T NEED A GIMMICK ..... *William J. Stein*..Nov. 57

FUELOIL DISTRIBUTION

API NAMES BATTELLE TO SEEK NEW USES .....Apr. 50
A CENTURY OF OIL PROGRESS .....Feb. 60
AS MAINE GOES .....June 65
BETTER UTILIZATION AND NEW USES .....Nov. 71
CAN'T TALK ABOUT PRICES? ..... *Craig Shaver*..July 59
CHARLESTON OIL CO. MARKS 50TH ANNIVERSARY ...Dec. 62
CONSIDER REBUILT TANKS .....May 70
COOPERATIVE COST CONTROL ..... *J. R. Greene*..July 51
DEGREE-DAYS AND DOLLARS .... *Thomas O. Johnson*..Sept. 82
EASTERN STATES EXPOSITION FEATURES OIL .....Nov. 67
FUELOIL CREDIT MANUAL .....Aug. 55
MONEY IS THE SPUR ..... *David G. Fanning*..June 53
OIL CENTENNIAL OBSERVANCE .....July 60
OIL DAILY'S 100 WAYS TO EXPAND DEMAND Nov. 77
OIL DEALER'S DAY SEEN IN NAM FILM .....Oct. 60
TITUSVILLE HAS A HAPPY DAY .....Oct. 66
WHAT CARRIES THE PRODUCT? .....Nov. 74
WILL OIL DEMAND KEEP GROWING? .. *Robert Gray*..June 58

GENERAL

AIR-CONDITIONING EXPOSITION CONFERENCES .....Dec. 58
BOSTON HOME HEAT COUNCIL HONORS DR. DOOLEY..Dec. 63
BOSTON PLAYS HOST .....July 49
BUILDING RESEARCH CONFERENCE ON HEATING .....Dec. 59
CLEANING FOR BETTER REBUILDING .....Nov. 76
CONVENTION WEEK IN PHILADELPHIA .....Jan. 75
DISTRIBUTION DIVISION SCHEDULES BOSTON CLINICS..May 66
GINNY TOURS EUROPE .....Mar. 72
HIGHLIGHTS OF PHILADELPHIA SHOW .....Feb. 68
OHI DIRECTORS MEET AT SEAVIEW .....Oct. 74
PROPOSE NEW OIL HEAT ORGANIZATION .....July 45
SEATTLE CONVENTION HIGHLIGHTS .....June 45
75TH ANNIVERSARY CELEBRATED BY HONEYWELL ...Nov. 68
WEBSTER ELECTRIC STILL DIVERSIFIES .....May 78

STATISTICAL *(Oilheating and Airconditioning)*

COMMERCIAL AIRCONDITIONING SURVEY
D. E. McLennan & C. W. Shirley..Apr. 60
DEALERS LOOK FOR IMPROVEMENT .....Jan. 61
HALF MILLION HOMES HEATED BY ELECTRICITY .....Mar. 58
HEATING OIL SALES FOR 1958 SHOW 11% GAIN .....Oct. 72
INSTALLATIONS TOTALLED 505,163 .....Jan. 53
1958 INSTALLATIONS REVISED UPWARD .....Apr. 67
PETROLEUM PRODUCTS SURVEY, NO. 11 .....Oct. 68
SERVICE DEPARTMENTS MAKE MONEY? .....May 51
ULCERS, BUT GOOD BANK BALANCES .. *Robert Gray*..Sept. 73

TECHNICAL *(Oilheating and Airconditioning)*

DRAFT PROBLEMS WITH OIL AND GAS
John W. Schulz..Aug. 59
DRYING OUT THE AIR .....J. R. Lewis..Aug. 61
ELECTRONIC DETECTOR SEES SPARKS ..W. B. Adams..Jan. 72
FOURTH COMMERCIAL OILBURNER EXAM
John W. Schulz..Mar. 75
FUEL SAVINGS UP TO 45% .....*John W. Schulz*..Jan. 70
FUELOIL BETTER FOR CHEMICAL-PLANTS POTS
Jean L. Dupuis..July 69
FUEL-UNITS—THE INSIDE STORY ... *John W. Schulz*..Dec. 54
GETTING THE MOST FROM FORCED-AIR
John W. Schulz..Sept. 76
GIVE 'EM THE AIR .....Sept. 72
HOW TO DESIGN FIREBOX FLOORS ... *Arthur J. Kaser*..Feb. 73
HOW TO ELIMINATE NOZZLE COKING .....Apr. 55
HOW SPARKY TESTS STACK CONTROLS
John W. Schulz..May 74
INSTRUCTIONS FOR SUPERINTENDENTS
Jean L. Dupuis..Apr. 71
IT'S IN THE AIR ..... *E. Colin-Smith*..June 61
M-H ULTRAVIOLET FLAME DETECTOR SOLVES WOES ..Aug. 78
MIGHTY MARVEL OILBURNER ..... *John W. Schulz*..Apr. 64
MODERN OILHEATING OF SCHOOLS.. *Jean L. Dupuis*
PART I .....Sept. 89
PART II .....Oct. 77
PART III .....Nov. 81
PART IV .....Dec. 65
MORE FROM SPARKY ON STACK CONTROLS
John W. Schulz..June 62
NEW APPRECIATION FOR ONE-PIPE SYSTEM
Jean L. Dupuis..June 66
NEW FIREBOX IN 30 MINUTES .....Oct. 54
OHI COMPLETES UNIVERSAL CODES .. *John W. Schulz*..Feb. 64
OILFIRED BOILERS ON ROOF SAVE SPACE .....Aug. 73
OIL HEAT LOCATIONS FOR ROTARIES.. *Jean L. Dupuis*..Jan. 84
POLLUTION CONTROL RELATED TO OIL COMBUSTION
Jean L. Dupuis..May 83
SIGNIFICANT BURNER IN PARADE OF PROGRESS
John W. Schulz..Aug. 49
SPARKY LAUGHS AT MOTOR TROUBLE
John W. Schulz..Oct. 61
YOU OUGHT TO KNOW .....W. B. Adams..Mar. 66
WHY DO NOZZLES COKE?
R. A. Billmeier and C. G. Salvesen..July 63

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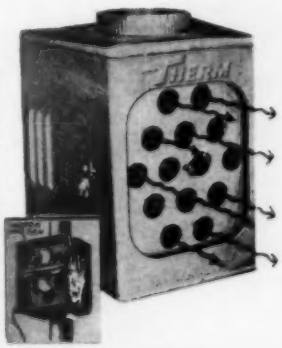

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Bethlehem Foundry & Machine Co. 84
Boston Machine Works Co. 89
Brodie Co., Ralph N. Inside Front Cover
Buckeye Iron & Brass Works, Inc. 87

—C—

Chevrolet Motor Division 15
Crescent Parts & Equipment Co., Inc. 99
Cromwell Printery, Inc. 99

—D—

Degree Day Systems 96
Delavan Manufacturing Co. ... 34
Delbridge Calculating Systems, Inc. 38
Dewey Gas Furnace Company .. 67
Dunkirk Radiator Corp. 42

—E—

Eagan Co., Inc., Walter H. ... 67
Edwards Engineering Corp. 93
Ever-Tite Coupling Co. 30

—F—

Ford Motor Co. 40, 41
Fram Corporation, The 20, 21

—G—

General Automatic Products Corp. 97
General Electric Co. .24, 25, 74, 75
General Fittings Co. 68
Gorton Heating Corp. 92, 93
Granberg Corp. 96
Guardian Products Corp. 26
Gulf Oil Corp. 73

—H—

Hago Products 76
Hannay & Son, Inc., Clifford B. 90
Harvey, Inc., Sid 37
Hayward Oil Burner Corp. ... 94
Henry Furnace Co., The 17
Herco Oil Burner Co. 78
Hess, Inc. 19
Hydrovalve Co. 97

—I—

Industrial Combustion, Inc. 97
International Couplings, Inc. ... 23

—J—

Janitrol Heating & Air Conditioning Division 35, 36
Johnson Furnace Co., The 88

—K—

Kenite Laboratory 100
Klemm Automotive Products Co. 92
Kraissl Co. 66

—L—

Liquid Controls Corp. 31

—M—

Mack Trucks, Inc. 71
Maid-O-Mist, Inc. 16
Marlow Pumps 81
Mastercraft Industries, Inc. 30
McDonnell & Miller, Inc. Back Cover
McLarty Systems 94
Mobil Oil Co. 69
Monarch Mfg. Works, Inc. Inside Back Cover
Monogram Products Co. 100
Mt. Hawley Mfg. Co. 72
Mutual Mfg. Co. 97

—N—

Neptune Meter Co. 39

—O—

OPW Corporation 18, 38
Oil Equipment Mfg. Co. 89
Olsen Mfg. Co., C. A. 46

—P—

Park Heating Specialties 93
Penn Controls, Inc. 10
Perfection Industries 100
Plastic & Appliance Co. 44
Purolator Products, Inc. 45

—R—

Radiator Specialty Co. 32

—S—

Scovill Mfg. Co. 27
Scully Signal Co. 7
Shell Oil Co. 85
Signet Controls 43
Sinclair Refining Co. 80
Stoddard Industries, Inc. 28
Stewart-Warner Corp. 83
Sun-Ray Burner Mfg. Corp. ... 4
Sundstrand Hydraulics Div. 3

—T—

Tankit Co. 99
Therm Gas Generator Co. 99
Thermolok Mfg. Co., Inc. 94
Thrush & Co., H. A. 77
Time Saving Fills, Inc. 42

—V—

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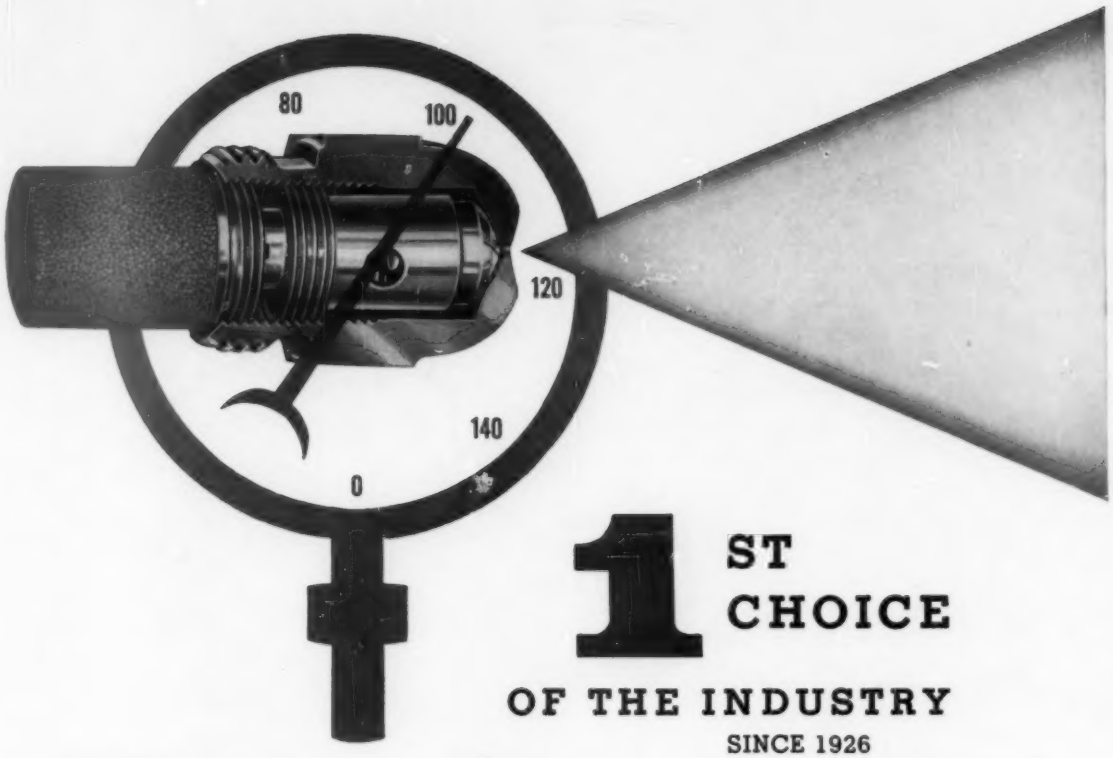

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We knew it was a good idea. Expected it to grow and grow. But frankly we have been surprised at how rapidly the heating industry has taken hold of water level control as a logical team mate for an ASME pressure relief valve.

In fact, many local codes now require a low water cut-off, or feeder cut-off combination, on hot water boilers installed in places of public occupancy—including multiple dwelling units.

Notice the diagrams of recommended installations opposite. For more detailed discussion get this booklet that tells the whole story: "Basic Safety Controls for Hot Water Space Heating Boilers."

The What-Why-How in eight interesting pages

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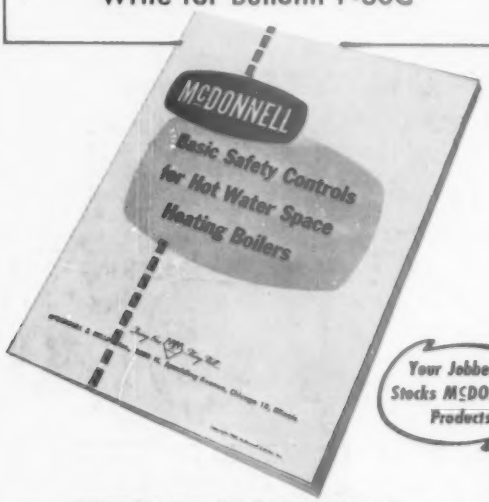

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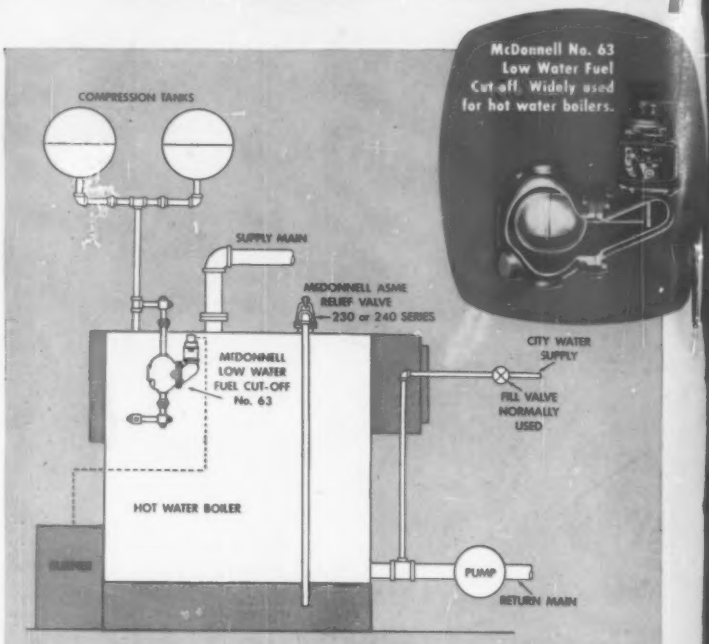
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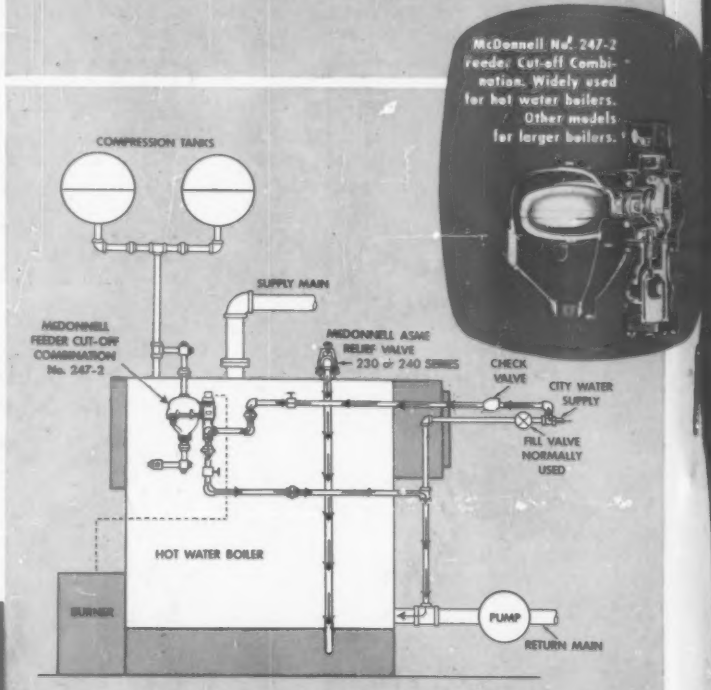
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